



THE
PALACE
OF
WESTMINSTER

Edward M. Holmes

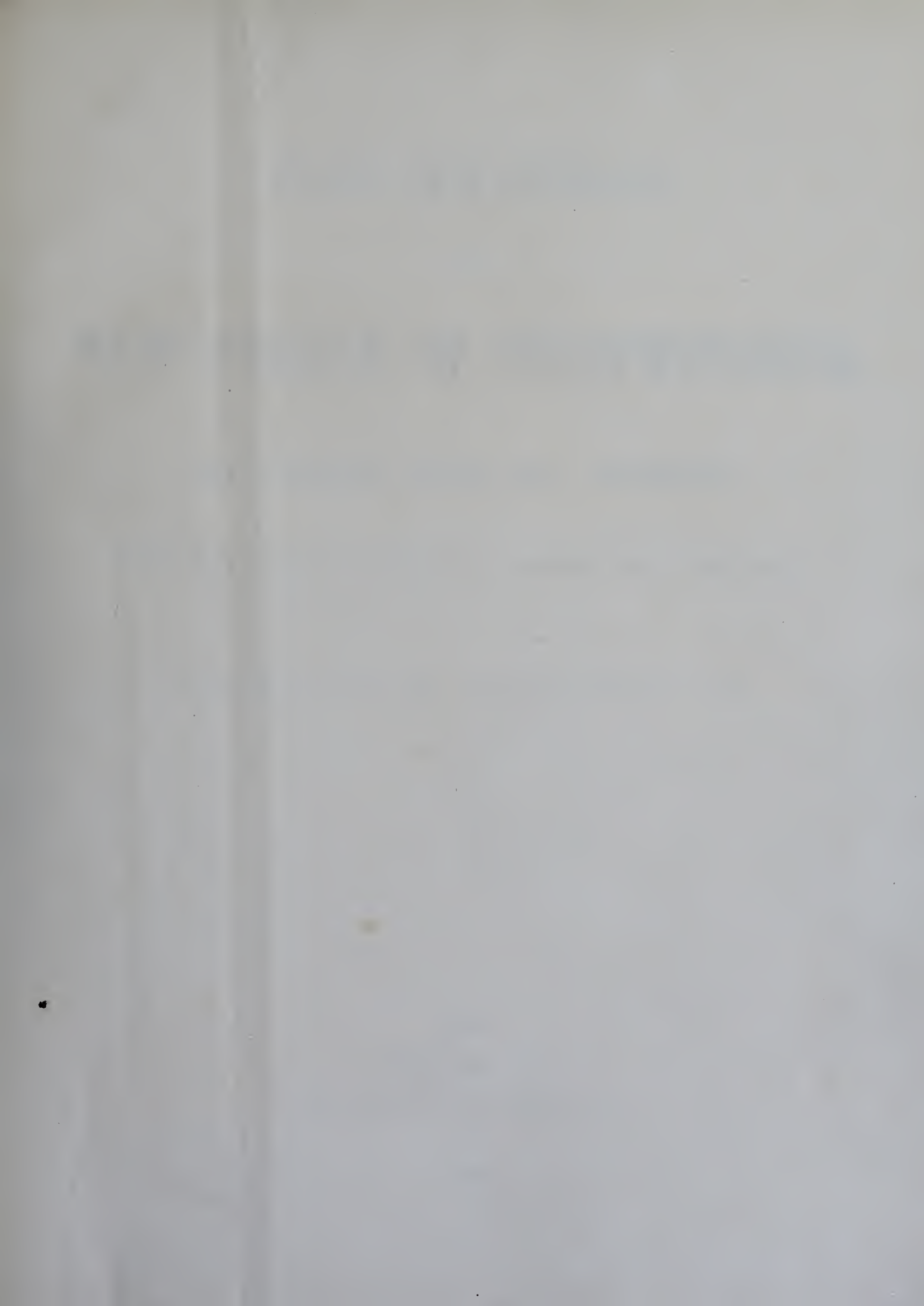
with Allwarringtons Compts.

October 1865.

Frazier T. Grove P. R. Rd



CLERKS' ENTRANCE, OLD PALACE YARD.



ILLUSTRATIONS
OF THE
NEW PALACE OF WESTMINSTER.

SIR CHARLES BARRY, R.A., ARCHITECT.

FROM DRAWINGS BY EDWARD N. HOLMES, ESQ., ARCHITECT.

THE LITHOGRAPHS BY EDWARD N. HOLMES. THE STEEL PLATES ENGRAVED BY R. P. CUFF.

S E C O N D S E R I E S.

London :

WARRINGTON & CO.

23, GARRICK STREET, W.C.

1865.

LIST OF PLATES.

SECOND SERIES.

PEERS' ENTRANCE, OLD PALACE YARD.

VICTORIA TOWER,—(CENTRE PORTION.)

VICTORIA TOWER,—(UPPER PORTION.)

VIGNETTE VIEW OF VICTORIA TOWER.

ROYAL STAIRCASE, VICTORIA TOWER,—

WOOD CUTS—*Royal Arms, Norman Porch—Carving over Doorway to
Royal Staircase—Ditto, over Doorway to Royal Gallery.*

THE ROYAL GALLERY.

CENTRAL TOWER,—

WOOD CUT—*Terminal of Spire.*

COMMONS' LOBBY,—

WOOD CUT—*Clock Dial over Doorway.*

CLOCK TOWER,—(LOWER PORTION.)

CLOCK TOWER,—(CENTRE PORTION.)

CLOCK TOWER,—(UPPER PORTION.)

HOUSE OF COMMONS,—

WOOD CUTS—*Speaker's Chair—Panel in Ditto—Portion of Oak Panelling.*

CLOISTERS,—

WOOD CUTS—*Four Bosses.*

STAIRCASE, MEMBER'S ENTRANCE.

STAR CHAMBER COURT.

NORTH FRONT.

THE NEW PALACE OF WESTMINSTER.

THE PEERS' ENTRANCE, OLD PALACE YARD.

The façade towards Old Palace Yard forms the Western side of the New Palace, as far as the building is completed in that direction, extending from the Victoria Tower to St. Stephen's Porch, at the South end of Westminster Hall.

The design consists of a centre compartment and ten compartments on each side of it, four stories high from the ground to the parapet; the centre bay rising above the roof and forming a low tower with octagonal buttresses at the angles, terminating with pinnacles of open tracery. The roof of the tower is in a transverse direction to the main roof of this part of the building, and is gabled, the gables forming the upper part of the East and West walls of the tower: that towards the West is highly decorated with panelling and tracery, has its coping crocketed, and on its apex a large copper finial, gilded. In this gable is a clock dial, which is one quarter the diameter of the large clock, and behind it a chamber for a clock is provided.

The ground story comprises, besides the Peers' Entrance in the centre bay, the gateway to the State Office Court, and three other entrances; namely, the Peers' Doorway to the Royal Staircase and Royal Gallery, in the bay next the Victoria Tower; in the North bay, adjoining St. Stephen's Porch, the doorway leading to the committee rooms and offices situated in this portion of the building; and in another bay is the entrance to one of the residences, and to the rooms for the use of the police. The remaining compartments of the ground story have each one square-headed window with two lights, and over the windows the massive base moulding is continued as a label.

The bays are separated from each other by square buttresses, with a weathered set-off, crocketed, at the top of the ground story; and on the face under the set-off are carved a massive imperial crown with a rose and a portcullis beneath, alternately. Above this set-off the buttresses are richly decorated with panelling, and are terminated with pinnacles having ogee roofs, on which are metal vanes gilded.

From the ground story to the parapet the windows are of two designs, being alternately large square-headed mullioned windows, five lights in width, with a transom and tracery heads to the lights,

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and oriel windows with canted sides, containing the same number of lights as the other windows and corresponding in detail with them. The oriels are supported by massive and elaborately moulded and carved corbels; the alternate windows having balconies which correspond with them.

Pannelling enriches all the surface of the wall, and moulded horizontal strings break the height into bands of panels; those between the stories of windows are filled with shields charged with badges and arms, and surmounted by crowns.

The parapet is pannelled, and over the centre of each bay, the sceptre and orb form a terminal, the orb being gilded.

The Poreh, which forms the subject of the accompanying illustration, projects from the building over the pavement, is the breadth of the centre compartment of the façade and is the height of the ground story. The piers are massive, elaborately decorated with panels and carving, the buttresses being similarly ornamented to the lower stage of those of the main building, and the covering is formed by a delicately wrought fan groin: a metal lamp is suspended from the centre rose. The four front piers are each surmounted by a large and beautiful lamp of copper, gilded.

The doorway beneath the poreh gives access to the vestibule, on the right of which is a glazed screen of stone, with doors which open into the cloak-room, a large hall, four bays in length and three in breadth, which are formed by massive piers and arches of stone; the compartments are groined, and in the centre of each of the four principal compartments are hemispherical lamps of cut glass for gas.

In the centre compartment of the vestibule and in that opposite to it at the end of the cloak-room is a fireplace, around which, as in every other part of these halls, the walls are pannelled. The panels over the fireplace contain shields with the arms of England, Scotland, and Ireland, the rose, thistle and shamrock surrounding them, and ribbons with the names of the patron saints beneath. The whole of these two compartments of wall decorations is painted and gilded.

The windows of the vestibule, cloak-room, and writing-room adjoining it, and the wall panneling of the staircase contain the arms of the peerage.

THE NEW PALACE OF WESTMINSTER.

THE VICTORIA TOWER.

This Tower, which is the grandest feature of the building, and the largest and highest square tower in the world, serves two distinct purposes; the lower portion of it being the regal entrance to the Palace, whilst the upper part forms a magnificent repository wherein are to be preserved the muniments of the legislature of the nation.

The foundations of the tower were formed by a double row of close piling, secured from spreading, and completely surrounding the site; the earth within this enclosed space was then removed, and concrete thrown in to a depth of 10 feet 7 inches, and upon this, two courses of stone landings 6 inches thick were laid. From this level to the ground line the foundations are of brickwork, the area of the tower being vaulted with brick nearly up to the same height, and forming a basement story beneath it. The tower rises majestically to the height of 331 feet, measuring to the top of the large metal crowns upon the angle turrets, the surface of the walls being nearly vertical; and the horizontal measurement across to the outside of the turrets is about 77 feet.

The elevation and details of the exterior architecture of the tower, which are given in this work, may seem sufficiently to explain to the general eye the principal features of it; nevertheless, it will be desirable to name the more prominent parts which serve to mark its beautiful proportions, in addition to giving a detailed description of the interior construction, so that a correct judgment may be formed of the whole, in the production of which, a knowledge of "the mysteries of proportion," and decorative art, together with constructive talent, have been combined, and the result is a work of the highest merit, whether viewed in its utilitarian or æsthetical character.

The tower is square on plan, with an octagonal turret at each angle the whole height, and is attached, the height of the lower story, to the building on the North and East sides; the West Side facing Abingdon Street, and the South side being within the South enclosure.

The general elevation which is given, as also the larger representations, shew the West side, to which the South corresponds.

The lower story is essentially different in its treatment from the upper stories, and, together with the tier of niches over it, has been already described. Above this niche band, the four sides of the tower are uniform in design, except in the sculptures; the space between the turrets is divided vertically into three principal compartments, occupying the same breadth as the great archways, and two smaller ones between these and the turrets; these compartments are marked by small square buttresses, of which there are,

therefore, four on each side, running up to the parapet. The angles of the turrets are similarly marked by small buttresses placed diagonally, running up to the parapet of the gallery surrounding the upper lantern. All these buttresses are pannelled throughout, and the monotony of their details and great height is dissipated by the moulded strings breaking round them: the entire surface of the walls is pannelled, giving a beautiful diapered appearance to them.

The horizontal divisions comprise three principal ones and three smaller ones, marked by bands of enriched quatrefoils across the tower; the moulded string courses enriched with carved bosses defining these divisions more clearly. The lower part of the tower, on the West side, occupied by the large archway used as the entrance for the Sovereign when visiting the Palace upon state occasions, has been previously described; and on the South side is a similar archway which is filled with stone screen work. Both these archways are flanked by colossal statues of the Lion of England, supporting banners of metal work gilded. The central niche above the entrance is occupied by a statue of the Queen, and is placed higher than the other niches in the same tier, which contain statues of the late Duke and Duchess of Kent, and other members of the royal family. The arrangement of the niches on the South side is similar. Above this range of niches is placed the first story of windows, and from this level the four sides of the tower are uniform in design; these windows are deeply recessed in the massive wall, and over them is a beautiful arcade formed in the thickness of the wall, solid piers dividing the arcade into three parts of the same width as the windows below. At the back of the arcade, narrow pointed windows give light to the interior, and one of them opens to the floor, forming a doorway for access to the arcade. Above this arcade is another band of quatrefoils and another tier of three windows, the jambs of which are pannelled, having elegant ogee heads with corbels, and crocketed hood mouldings, supported by angels bearing shields. Above these windows is a second arcade similar in arrangement and details to the lower one, and above this rises the pierced parapet, which, though when viewed from below appears somewhat light, is yet in reality of massive detail; the divisional buttresses before described separating each side of the tower into five compartments, are continued above the battlements and are terminated by crocketed gablets; from behind each of these rises a pinnacle, having the lower part square and the upper octagonal, surmounted by a large imperial crown, carved in stone, which together, measure about 13 feet in height from the top of the coping. On the centre of each battlement of the parapet is a finial supporting the orb and cross, also carved in stone.

Mounting high above the parapet, higher than the enormous roof of iron, with its elegant pyramidal composition of buttresses and screen work which serves as a support to the gigantic flag-staff, each of the octagonal angle turrets now becomes isolated, and from the base of the parapet upwards to the cornice is designed in three compartments; the two lower compartments being panneling, the upper compartment open tracery: then comes the bold cornice, with gurgoyles, and grotesque figures at the angles, upon which rests the solid parapet, richly pannelled: at the angles of the parapet are pinnacles supporting lions holding metal banners gilded, and from each of these pinnacles springs a flying buttress to the upper lantern. The course of

stone forming the heads of the compartments of open tracery, and that forming the cornice, spread inwards; the latter serves as the floor of the balcony, and upon it stands the upper lantern, which measures 9 feet 10 inches across its external diameter, and is entirely of open stone work; the lower portion of it having on each side of the octagon, a single opening with a four-centred arch, the upper part being subdivided into smaller openings with tracery. The angles are strengthened by slender buttresses, which terminate under the grotesques at the angles of the cornice, and the flying buttresses, before named, connect them with the pinnacles of the parapet. The upper lantern of the turret is terminated by an ogee shaped stone roof, of elegant form, with crocketed angles, and upon its summit is a stone moulded seating, which receives the enormous octagonal crown on the top. This crown is partly of iron and partly of copper, and is gilded: it is 5 feet 2 inches across, and 6 feet 1 inch high above the stone seating, and is secured by a strong copper rod, which passes from the top through the upper courses of the stone roof to an iron cross tie fixed about 13 feet down. These turrets are alike in all their details.

A circular staircase of light ironwork, from the level of the iron trellis-work over the main gutters, affords access to the gallery at the top of these turrets. The trellis steps, 76 in number, are secured to a strong iron newel in the centre, and suspension rods through the outer end of the steps secure them, and serve as a protection to those who are desirous of ascending to the highest point of the Palace which is accessible. The staircase is 5 feet 6 inches in diameter, and the inside of the turret, from the base of the parapet upwards, is octagonal in plan, 10 feet in diameter; so that the staircase is quite independent of the stone work.

The staircase of the South-east turret differs somewhat from the three other staircases, inasmuch as it is in continuation of the well staircase from the ground; and to support this newel a strong iron bracket is fixed to the stone wall of the turret, projecting over to the centre of the staircase, which descends perpendicularly nearly 250 feet from this point.

The height of the gallery from the ground is 280 feet 6 inches, and from here the roof of the tower looks admirable; indeed, the size of its details can be seen nowhere else to such advantage.

The size of the tower, measuring from the external face of the walls, is 63 feet 6 inches square; the jambs of the great arches on the West and South sides measure 13 feet 6 inches* from the outer face to the inner one, the interior jambs being repeated on the North and East side; the area of the groining of the lower story is, therefore, 36 feet 6 inches square. The piers of this story are built nearly solid to the level of the top of the groin. The interior of each turret forms a cylindrical shaft, 8 feet diameter, from the basement floor to the top; the one at the South-east angle being the staircase from the ground to the top of the tower,

* See "Interior view of Entrance to Royal Court," on the East side; and "The Royal Entrance on the North side;" of which illustrations have been given.

communicating with the void over the groin, with the roof, and the turret above; that at the North-east angle being used as a shaft for ventilating purposes, and the South-west shaft serving to supply fresh air to the interior of the building.

Over the apex of each of the great arches on the four sides of the groin, upon brick-work, is a strong iron template. These receive the ends of the four massive iron girders, 4 feet 6 inches deep, 2 feet broad, and weighing about 12 tons each, which support the system of iron columns and girders carrying the fire-proof rooms by which the interior of the tower is occupied; and immediately over these girders is the floor of the sorting room, extending over the whole area of the upper portion of the tower, which is 51 feet 7 inches square; the walls of it from above the great arches to the base of the parapet are of a uniform thickness of 6 feet. This room has a doorway which communicates, by means of an iron staircase occupying a portion of the North-west turret, with the upper floors of the West front where are the offices of the House of Peers, and with the fire-proof rooms in the tower. The height of this sorting room is 16 feet 8 inches, and slate tables are fixed against the walls and round the centre, where there is a large opening, protected by an iron railing, directly over the eye in the centre of the groin about 6 feet below. The space between the top of the groin and the sorting room floor contains the large iron girders just described; and here is also the iron door which covers the opening in the groin, and by means of a rack and pinion motion is worked by a crank in the sorting room: here can be also seen the jointing of the masonry of the groining, and on looking down, a near bird's-eye view is obtained of the figures and details of the upper part of the work of the porch, the size of which can hardly be realized from the ground.

Standing in the sorting room, upon the large iron girders before named, are the eight lower columns, 14 inches diameter, of those which support the floors. Each one stands exactly opposite to the centre of one of the two central piers in the side of the tower; and the eight being placed equi-distant from each other, they occupy the angles of an octagon. Iron girders, the main support of the floor over, are fixed into the piers at the side of the tower, rest upon the columns, and projecting beyond each one meets the other which forms a right angle with it, and they are bolted together, making a point of support for the curb of the central circular staircase.

These girders thus form four large compartments at the angles, and four smaller square ones around the central space: in the smaller ones, the beams of the floors are fixed parallel to the sides of the tower, but in the angle compartments they are fixed diagonally; and upon the lower flanches of these beams, arches are turned, with plain tiles in cement; half-brick walls upon these arches carry the floor of Hopton-wood stone. This arrangement of the beams and flooring is carried out in the eight floors above the sorting room; and upon the main girders are built half-brick walls, which form the rooms. The columns are gradually reduced from 14 inches in diameter in the bottom story, to 8 inches diameter in the top story.

The main girders of the third floor above the sorting room, which are level with the floor of the first arcade, are considerably stronger than the others, and assist the lower girders in supporting the weight above them.

There are altogether eleven floors in the tower, including the sorting room and the two in the roof; one of these being the base of the roof, a foot above the string course under the parapet, and the uppermost halfway up the roof. The other eight are each divided into eight rooms, in the manner above described; those at the angles of the tower measure 19 feet square, and those between them 12 feet 9 inches by 15 feet 9 inches, the central octagonal staircase being 19 feet in diameter.

The doors into these rooms are arranged one on each side of the staircase, and above these, in each of the eight floors, are other doors, from a gallery round the staircase, to galleries in the rooms, affording easy access to the upper tier of eases, which is like the lower one. These galleries are fixed to some of the rooms only, but the same arrangement will be carried out in the others as additional accommodation may be required. The floor of the galleries is of slate upon iron bearers; suspension rods at once giving support to the ends of them, and to the railing surrounding the galleries.

All the doors to these rooms are of iron, as are also the frames, and the latter have india-rubber fixed in the rabbets to make them fit closely.

The central staircase is a very striking feature, on account of its spiral form, its lightness, and peculiar construction; the steps and landings being of iron trellis-work, with suspension rods at intervals to support them. The well-hole of the spiral is 6 feet diameter, and the steps are 3 feet long; the extreme diameter of the spiral is therefore 12 feet, and it reaches from the floor of the sorting room to the upper floor in the roof, a height of about 190 feet.

The walls form in plan an octagon of about 19 feet diameter; the beams supporting the floors of the rooms are projected beyond these walls, and support the eurb and landing surrounding the spiral staircase at each of the floors. These landings are paved with stone.

Midway, in the height of each story, is a landing or gallery with a floor of iron trellis-work on cantilevers, and of the same breadth and form as the stone landings. The staircase winds from landing to landing, and is 7 inches clear of them all round, the well hole surrounding the spiral being about 13 feet diameter to the eurb. An oak capping on the balustrade, forms a continuous handrail from bottom to top on both sides of the staircase.

The roof is entirely of iron, of the form known as the "Mansard" roof. It stands on a level with the string course at the base of the parapet; the gutter being 2 feet 9 inches wide, the side of the roof sloping from about 4 feet above the floor to the top, where it forms a flat about 35 feet square. The sides and top of the roof are covered with plates of iron, lapping over each other horizontally, but having, over the vertical joints, semi-circular rolls. Beyond the side of the roof, the flat projects some 2 feet 3 inches, and is supported by vertical stanchions fixed above the rolls, which form compartments that are filled with tracery, the whole forming an elaborate cornice; and above the cornice is an elegant and massive iron railing, in corresponding compartments, with fleur-de-lis heads to the standards. Larger newels with flying buttresses, divide the length of railing and cornice into three main bays, those at the angles terminating high above the roof with floriated tops: these together, are a beautiful and bold finish to the massive roof. Between the angles of the roof and the stonework of the turrets, screen work of iron is fixed, which gives a solidity to the composition. They rise to within 5 feet of the flat, and have on the top a cornice and trefoil brattishing. A passage is constructed in the roof, at the base of each of the turrets, with a pointed archway in each side of the roof, so that there is free access to all sides of the tower and to the turrets; and strong iron gratings form a floor over the gutters and to the turrets.

From the top of the roof springs the crowning feature of the tower, consisting of four immense flying buttresses, with square crocketed pinnacles; the arches of the buttresses are terminated in a cylindrical shaft, having a moulded cap enriched with foliage, the top of it being 45 feet above the roof. These four arches have moulded cappings with crockets runnings up them. The shafts of the buttresses are connected on the sides by screen-work of iron; cusped ogee arches, with crockets and finials, and buttresses with crocketed pinnacles, dividing each screen into four compartments.

The enormous flag-staff is of wrought iron; it stands on two cross beams at the level of the roof, in a socket, and passes through the above-named shaft, and additional support is given to it by strong gibs placed under one of its horizontal ribs and driven through the shaft. It is 120 feet high to the top of the crown at its summit, two feet diameter from its base as high as the top of shaft supporting it, above that point it gradually tapers to the top, where it is 9 inches diameter. The crown is 3 feet 6 inches diameter, and 5 feet 6 inches high, of copper, gilded.

In the centre of the roof, sloping to the lower part of the cylindrical shaft supporting the flagstaff, is a skylight, which admits light to the central circular staircase.

The rolls on the sides of the roof, the tracery under the cornice, the railing surrounding the flat, the leading mouldings of the buttresses and screen-work, the shaft round the flagstaff, and pateræ on the

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faces of the buttresses, are gilded; which renders the effect of the grey colored roof truly magnificent, and worthy of the noble pile of which it is a part.

The height from the ground to the floor of the sorting room is 68 feet 6 inches, to the lower record rooms is 86 feet 10 inches, and to the base of the roof is 239 feet 3 inches, and the height of the roof is 34 feet 6 inches; making the total height, to the top of the roof from the ground, 274 feet, nearly, and to the seating of the flagstaff, 275 feet. The total height from the ground to the top of the flagstaff, is about 395 feet.

The turrets measure 14 feet 6 inches diameter, to the external octagonal face, the stonework of the upper part below the balcony being 10 feet across the inside diameter; the height from the ground to the balcony is 281 feet 6 inches.

The diameter of the upper lantern of the turret is 7 feet 4 inches inside, and 9 feet 10 inches outside to the faces of the octagon.

The ascent to the top of the turret is made by means of 553 steps; and the central staircase from the sorting room to the upper floor in the roof, consists of 416 steps.

A separate turret of stone leads from the lower floor of the roof and the gutters to the flat, and the staircase in this consists of 53 steps.

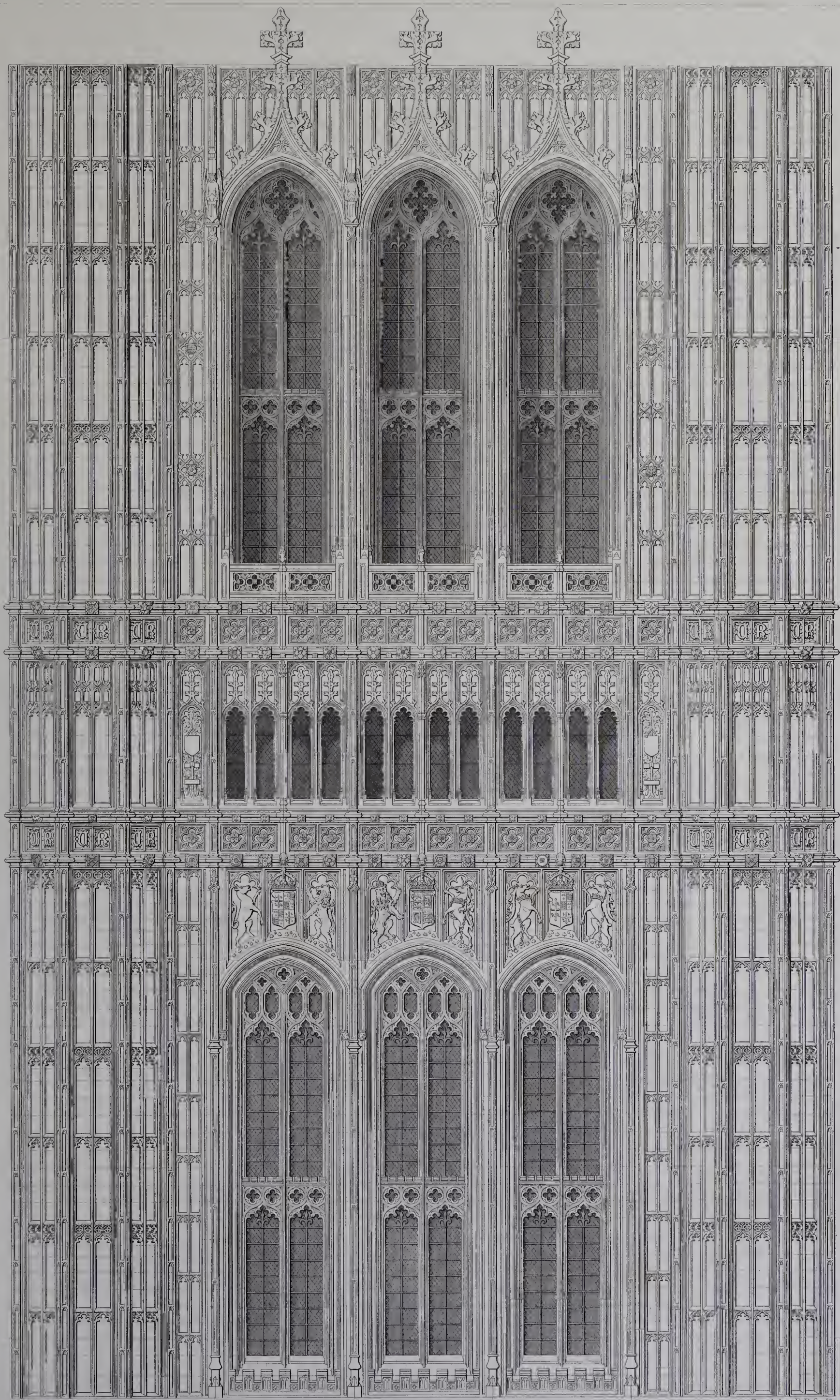
The materials used in the construction of the tower were about 117,000 cubic feet of stone, 428,000 cubic feet of brickwork, and 1,300 tons of iron; and the weight of the whole is nearly 30,000 tons, which gives a pressure of about 8 tons per foot superficial on the foundations.

Having now completed this description of the tower, there remains to add only, that without a visit to its interior and to its summit, no adequate conception can be formed of its vast size. The view from the flat of the roof will amply repay the labor of the weary ascent up more than 500 steps, even when the atmosphere is only partially clear; but in fine weather it is truly magnificent: for in addition to the crowded metropolis, the buildings and localities in the vicinity, amongst which are the Abbey with its Cloisters and the School, and the old building known as the Jewel Tower of Edward the Third; farther off northward, Whitehall, the Mall, and Charing Cross; eastward, Lambeth Palace and Church, and in the distance down the river, Somerset House and St. Paul's Cathedral, are seen from here almost at a glance, and being intimately associated with the history of the nation, the scene cannot fail to bring to mind reminiscences of more or less interest to every Englishman; then the parks, the trees studded here and

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there amongst the buildings, the river, busy with the traffic which glides over its surface, and the surrounding country stretching to the horizon, add charms of nature to the whole.

From here, the building extending over nearly eight acres, can be seen to the greatest advantage, and nowhere else can the disposition of its numerous parts be so readily distinguished and comprehended, and its magnitude be so thoroughly appreciated.



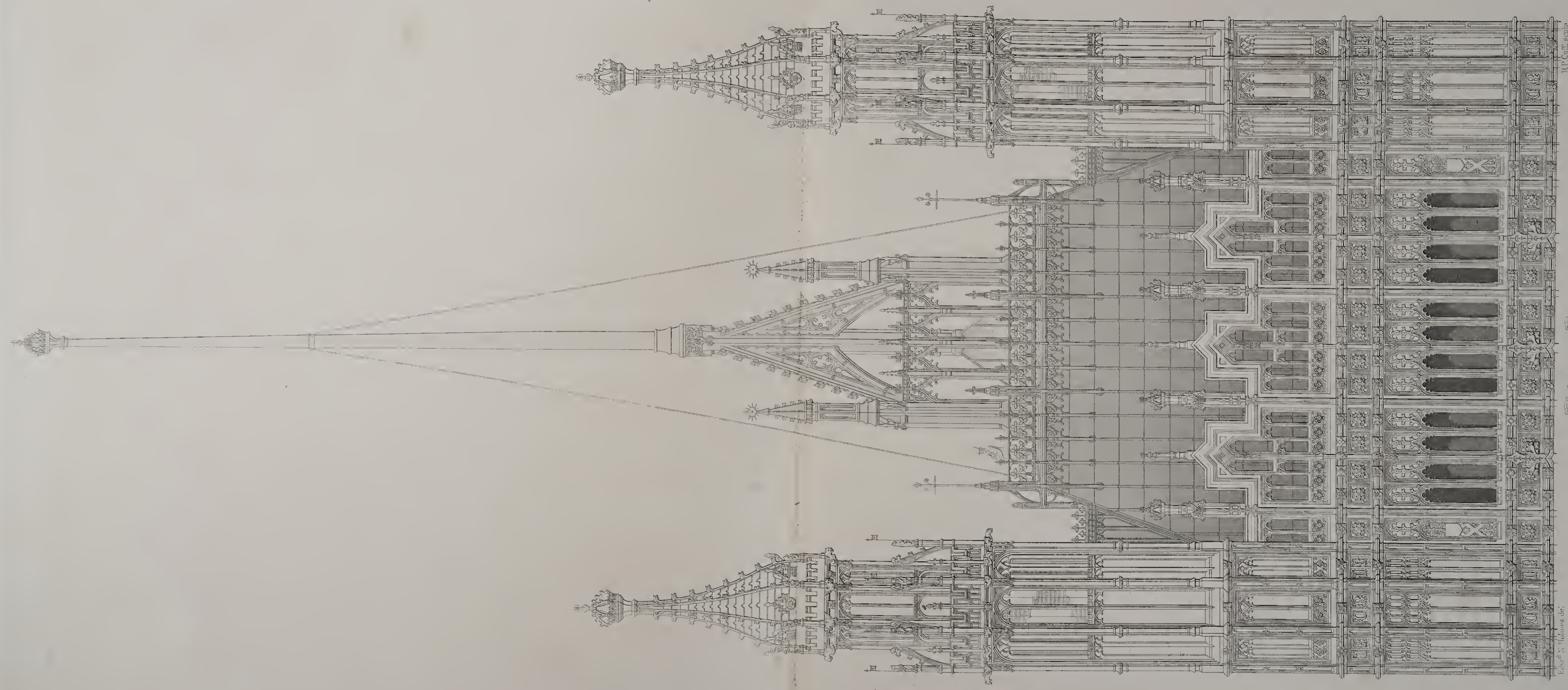
E N Holmes Del.

on Steel by R P Cuff

Victoria Tower.
Centre Portion.

Scale of 5 10 20 30 40 50 60 feet

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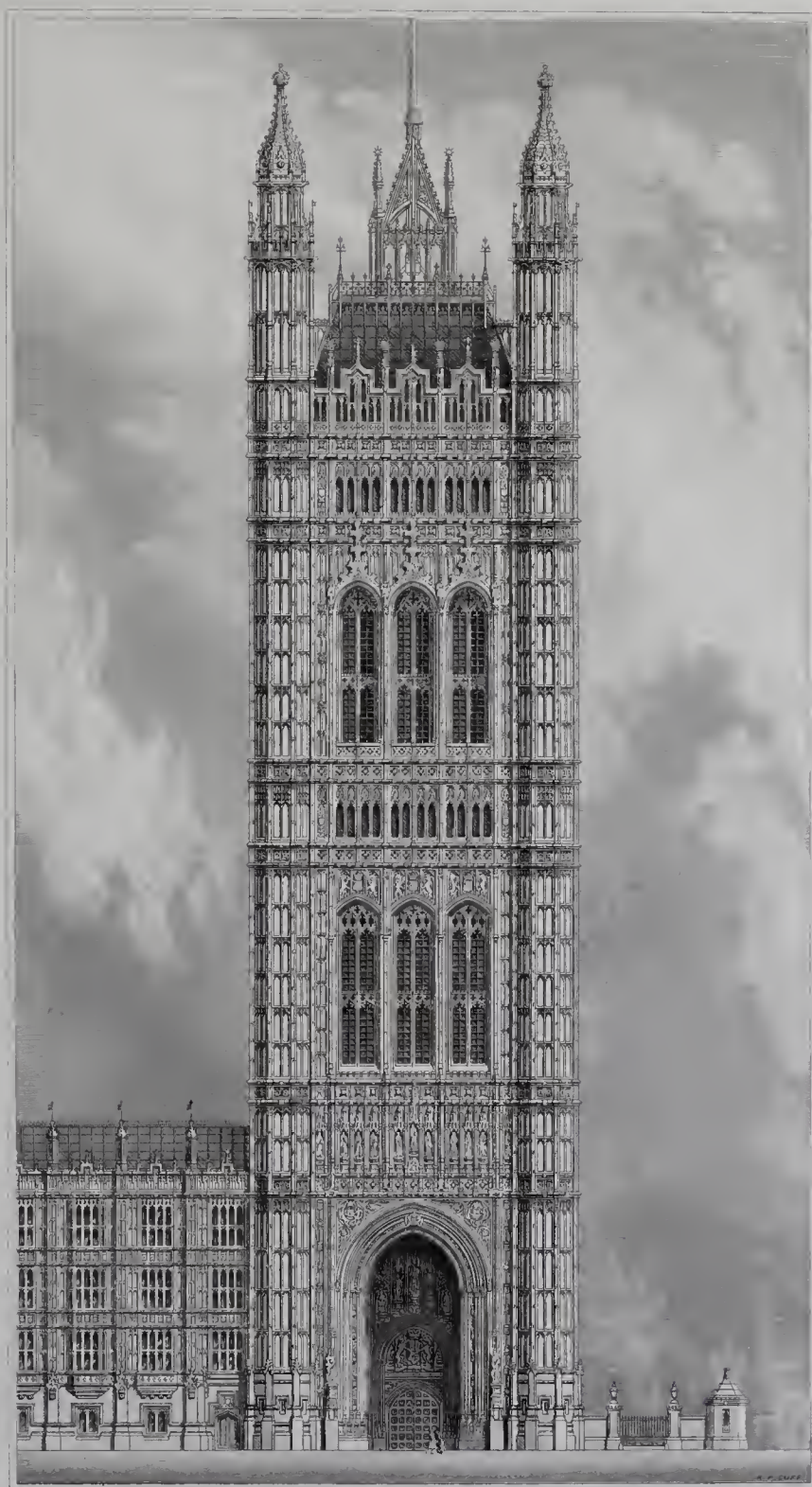


Engraved by N. H. Jones del.

Cathedral of St. Andrew
Upper Partion

Warrington & Co London

R.P. G. 1851



Scale of Feet

VICTORIA TOWER.

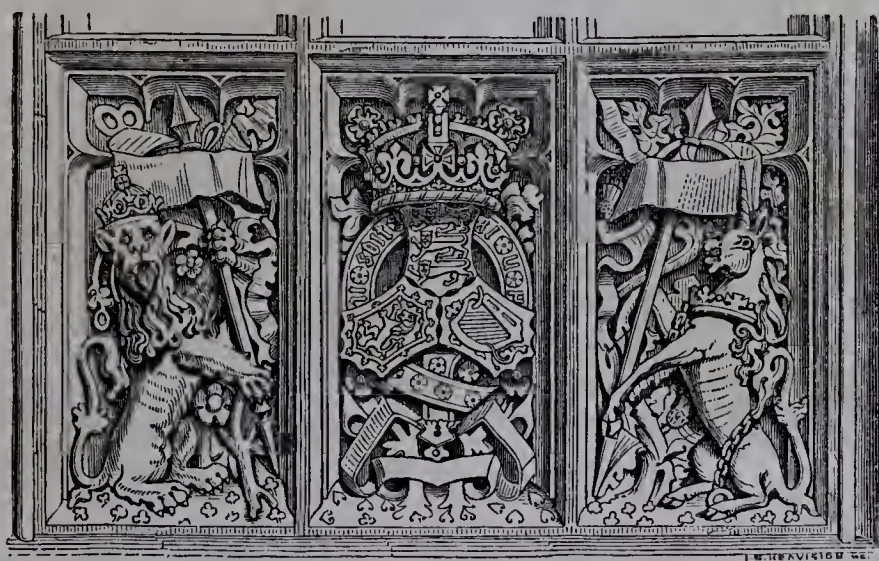
Warrington & Co. London.

THE ROYAL STAIRCASE.

The Royal Entrance, of which a view has been given, is on the South side of the Royal Staircase, and opens on the spacious landing at the foot of it: a smaller entrance from the West front in Old Palace Yard opens on the same landing directly opposite the staircase, and is designed as the Peers' Entrance to this part of the building. The doors of the Royal Entrance are of elaborate design; they are panelled with tracery, and the margins externally are enriched with a continuous band of delicately wrought quarterfoils, the interior being fitted with locks of superior workmanship.

The Royal Staircase may be described as a flight of stairs nearly fifteen feet wide, consisting of twenty-six steps, ascending between two parallel walls after the manner of the grand staircase in the Vatican. The steps are of Aberdeen grey granite, polished, eight feet nine inches long in one stone, five and a half inches rise, and sixteen inches on the treads; the ends are of rich marbles forming a border of two colors on each side; the risers are sunk, and have red marble inserted in the panels.

The walls are of stone, and the roof has a pointed vault of the same material, the whole length of the flight and following its inclination; the walls and vault are divided into three compartments in the length, by slender columns and moulded ribs; the space between them is decorated with panelling, the design being continued across the vaulting.



The upper landing of the staircase is enlarged to form an ante-hall, which is named the Norman Porch. In plan it is a square, the side of which is rather more than double the width of the staircase; it is vaulted with lierne

groining in four compartments, springing from clustered wall shafts and a clustered shaft in the centre of the hall; against the bases of these shafts under the angles of the groining, are placed stone pedestals, which are intended to support bronze statues of the Norman kings: four similar pedestals decorate the lower landing against the Royal Entrance, which is groined with a vault of the same design as the vaults in the Norman Porch. The two groins seen in the view are pierced with circular eyes for light, and from the centres of all these vaults brass chandeliers of elegant design are suspended.

The staircase is lighted on the North side from the State Office Court, by narrow windows, one being formed in each panel of the wall. These windows are glazed with flowered quarries enriched at intervals with royal badges having mottos between them: the two windows in the Norman Porch are on the same side, are larger, and have rich tracery in the heads. The glass in the centre light of the first window presents a full length portrait of Edward the Confessor, that in the centre light of the second window represents Her Majesty seated in a chair of state, the side lights of both windows being enriched with heraldic banners and supporters: the window of the lower landing is larger and equally beautiful in the design of the stone work and the glazing.

The landing at the foot of the Royal Staircase and the floor of the Norman Porch are paved with marbles of various colors arranged in bold design; the large pattern of which is rather injurious to the effect of the staircase. The decorative painting of this part is yet unfinished.



The doorway at the top of the staircase leads into the Royal Gallery. Over this doorway and also over the doorways leading to the Queen's Robing Room and Guard Room, are carved the elaborate tracery and heraldic ornaments represented by the wood-cut above.

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Over the entrance from the Victoria Tower to the Staircase, the royal arms, motto, and monograms are sculptured, a representation of which is given below.



When Her Majesty opens or prorogues Parliament, the staircase is lined on the sides, by the yeomen of the guard in their quaint dresses, holding halberds, (relics of the Tudor age); whilst the gentlemen-at-arms occupy the Norman Porch; and for a short time previously to the arrival of the Sovereign, the lower landing is thronged with the Officers of State who are apparelled in their gorgeous dresses, some of which are of antique design, and who on the arrival of the state carriage under the Victoria Tower advance to meet the Queen; the Royal procession then moves up the staircase to the Robing-room to which Her Majesty retires previously to going into the House. By means of a telegraphic wire which has been laid from the angle of the lower landing of the staircase to St. James's Park, a signal is made the instant Her Majesty steps on to the pavement, so that the guns in the Park are fired simultaneously. On these occasions the Palace is seen to the greatest advantage as a work of art.



J. N. Holmes. Archt. dell. et lith.

ROYAL STAIRCASE.

Victoria Tower

Warrington & Co London

THE NEW PALACE OF WESTMINSTER.

THE ROYAL GALLERY.

This Apartment, which is very fine both in its size and proportions, and when complete will be one of the noblest in this country, is 110 feet 6 inches long from north to south, 44 feet 6 inches wide, and 45 feet high. It is situated between the Queen's Robing Room on the south, and the Princes' Chamber on the north; and forms the approach to the House of Peers from the Royal Staircase. On State occasions when the Queen opens Parliament, Her Majesty passes in procession with the Great Officers of State through this Gallery into the House of Peers, and for the accommodation of the public, temporary benches are then fixed along the sides.

The ceiling is very bold in its details and is richly decorated with colors and gilding; the ribs, which separate its main compartments are curved at the ends and are formed into large spandrils in which are carved the Royal supporters, rest upon corbelled shafts between the windows. Each of the smaller compartments of the ceiling is ornamented with a centre containing the rose en soleil carved and richly gilded; lions and roses in colors and gilding filling the surrounding panels.

The walls under the windows are formed into compartments for paintings, the subjects of which will be a series of remarkable events, relating to the naval and military history of the country, and the Fine Arts Commissioners have entrusted the execution of them to Mr. Maclise, R.A. The two in the centre of the length of the Gallery are very large, being 45 feet 6 inches long and 12 feet 1 inch high. Upon that on the east side is represented the interview between Wellington and Blucher after the battle of Waterloo*; the largest work of this artist and altogether a grand production, thoroughly masterly in design and carefully worked out in all its details. Our limits prevent the introduction of anything like an adequate description of this important work of art; yet we must give a sketch of it. Its arrangement may be described as consisting of five principal divisions; the central group represents the Duke, tired, with a grave and thoughtful countenance, mounted on his horse Copenhagen, and Blucher, also mounted, who, as he is leaving in pursuit of the enemy, turns to grasp the hand of the iron duke: on one side of this centre are the English Staff, and on the other the Prussian; Gneisenau, with white plumes in his hat, Bulow and Ziethen, are amongst the latter; amongst the former, Sir Hussey Vivian (Lord Vivian) in a Hussar's dress, mounted on a white horse, will engage the attention of every one; for, besides being a principal light in the composition and richly colored, the figures of both the horse and his rider are exquisitely painted and very carefully finished; the leopard skin is nature, and so is the horse and so are many of the horses in these groups of equine life, which are so skilfully arranged both in form and coloring, and contain so much of nature, that they command the admiration of every spectator. On each side of these are two minor groups, which constitute the remainder of the composition; numbers of wounded, dying,

* The scene represented occurred at the small cabaret on the causeway between Waterloo and Genappe, about nine o'clock in the evening of the 18th of June, 1815. It has been said that the heroes did not meet here; that may be, but certainly they were together and parted here; and Lord Sandys (at that time Lord Arthur Hill) who saw them on horseback at that spot, and whose portrait is introduced in the picture, narrated the circumstance to Mr. Maclise.

THE NEW PALACE OF WESTMINSTER.

and dead men fill up the sides and foreground of the picture. On the right side a Highlander and a Fusilier carry off the body of "young Howard," and near the centre three of the Life Guards, who are sitting on the ground wounded, brandish their sabres and cheer, though evidently with pain. Here are life and death in close embrace; suffering humanity displaying a great variety of muscular contortion; the wounded and the dead in postures as various as the figures, scattered throughout; whilst the dying and dead horses, implements of destruction, shot, shell, swords, broken musical instruments, and helmets, shakos and banners, are seen in every direction. The drawing of all these, in fact of every part, is marvellous.

This picture was finished in January 1862, having occupied the artist about a year and nine months in its execution, after the cartoon was approved of.

The subject of the companion Picture on the west wall of the Gallery is the Death of Nelson and is in progress; the scene represented is the quarter-deck of the Victory; the hero having just received his death wound is stretched along, being partially supported by Captain Hardy, one of the group, who with anxious countenances are surrounding him.*

The length of the compartment on which this picture is painted is the same as that of the quarter-deck of the Victory.

The process adopted in the execution of these paintings is that of stereo-chrome or water-glass, the solution being applied to the painting after it is finished.

The lower part of the walls is lined with a richly panelled dado of wainscot, and a bench with stuffed crimson morocco cushions is fixed against it.

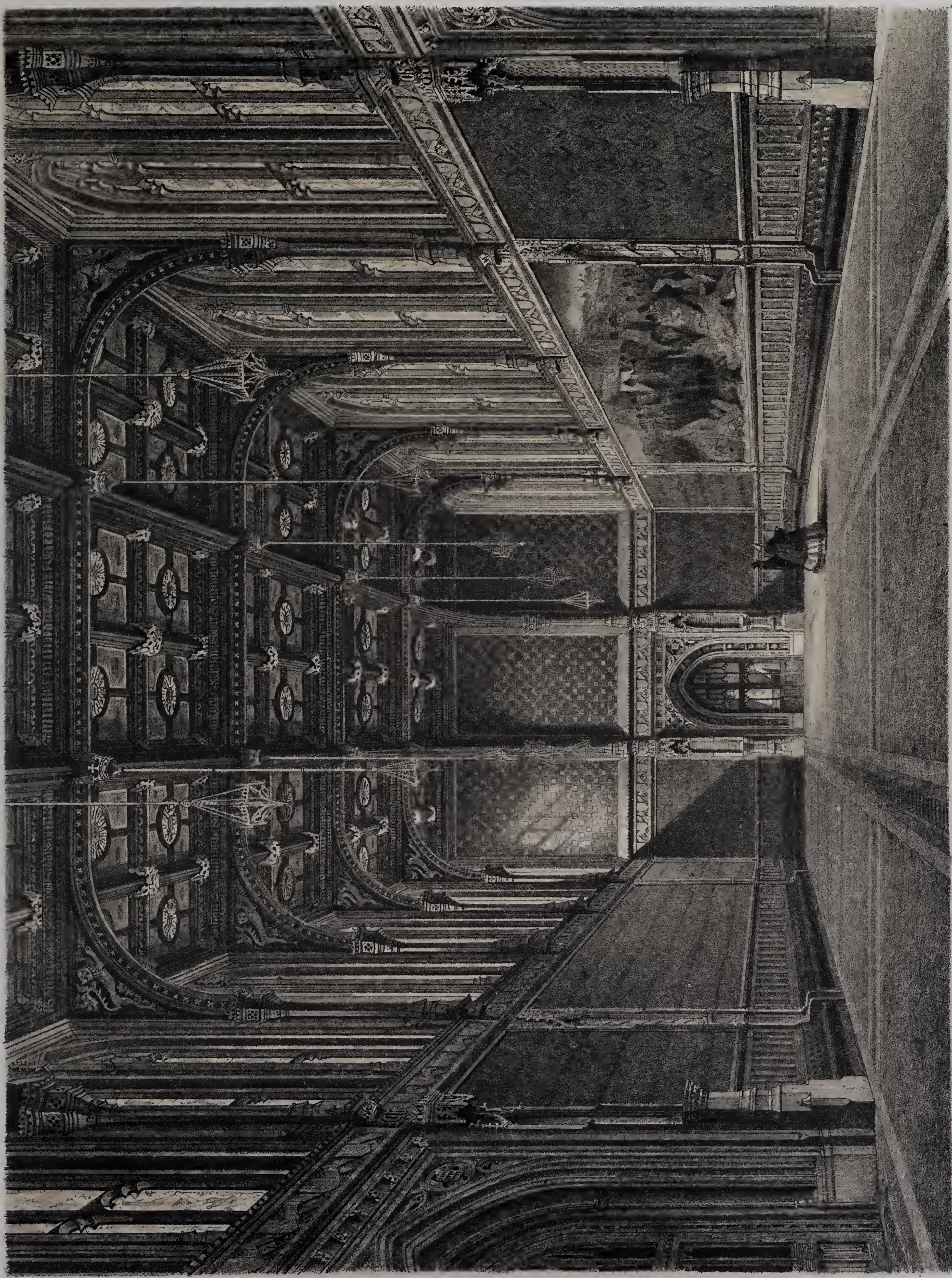
It is proposed to place upon the pedestals twelve marble statues of British Monarchs, from James I. to William IV., comprehending the Sovereigns of the Houses of Stuart and Brunswick.†

The floor is of encaustic tiles, arranged in compartments similarly to the ceiling, broad bands with inscriptions intersecting it longitudinally and transversely.

The windows are filled with stained glass containing the armorial bearings of the English and Scottish Monarchs, their supporters enriching the lower lights.

* Lord Nelson was pacing the quarter-deck with Hardy, and as he turned from the main-mast in the direction of the companion ladder, a ball fired from the mizen top of the Redoubtable struck him in the left shoulder, and he fell upon the deck on the spot now marked by a brass plate inscribed—"Here Nelson fell." The shattered yard arm suspended in the rigging of the Victory represents an incident which occurred during the engagement, and by means of this the enemy at one time attempted to board the ship. In both these pictures the artist has adhered to facts as far as he could, in the accessories and in the incidents which are introduced.

† 13th Report of the Commissioners on the Fine Arts, 1863.



E. N. Holm sc. Arch^t del^t et litho

THE ROYAL GALLERY.

Warrington & C^o London

CENTRAL TOWER.

THE Central Tower surmounts the portion of the building known as the Central Hall. Its base, springing from above the groin of the Hall, is constructed in the form of the frustrum of a cone, the inside being of brick, the outside of stone octagonal in plan.

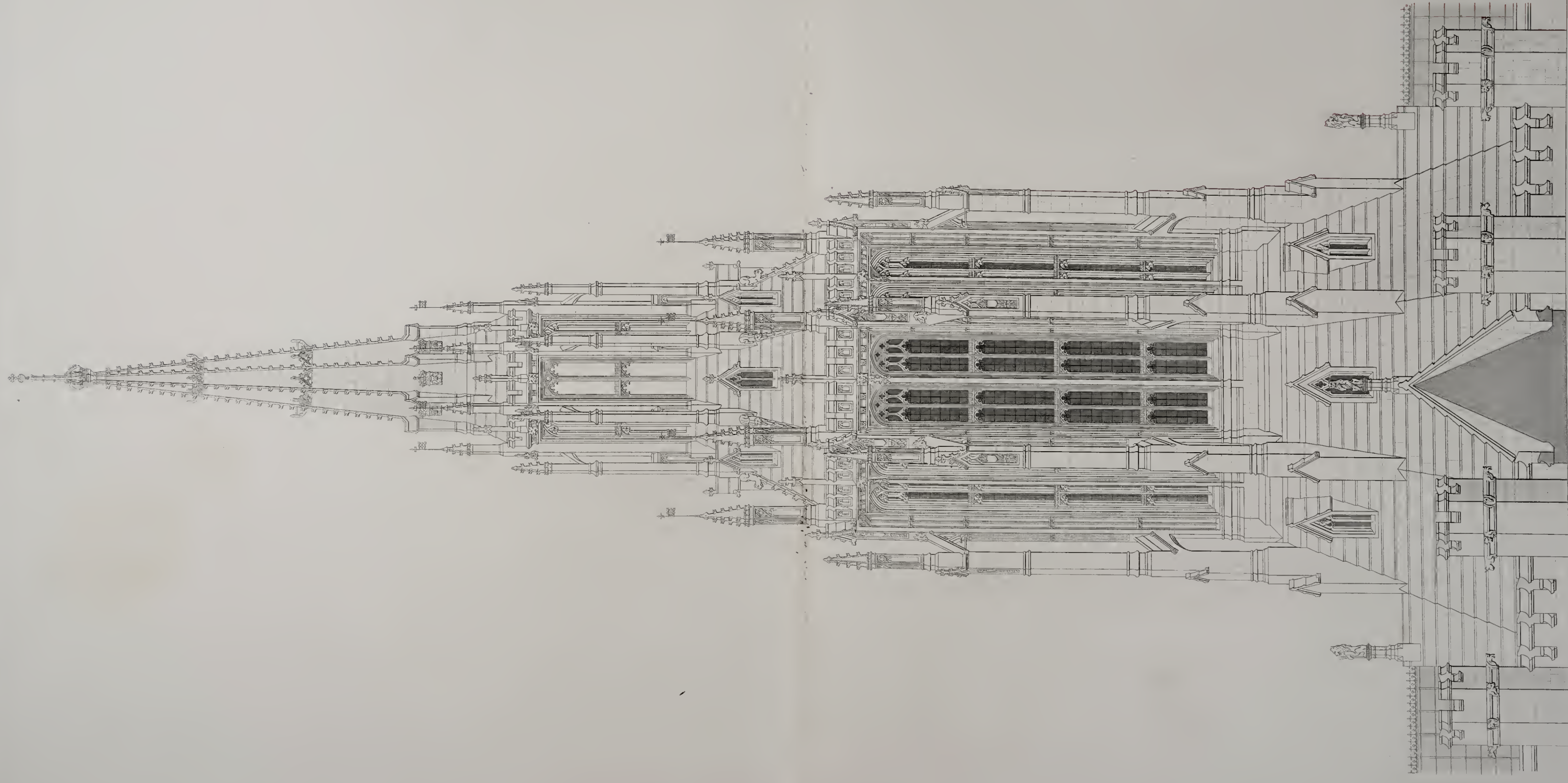
The height of the Tower, from the floor of Westminster Hall to the top of the cross on the terminal of the spire, is about 261 feet.

To those who are interested in the construction of architectural works, the inside of the Tower affords a pleasing object, the view of the lanterns and spire from above the groining of the Central Hall being entirely unobstructed, and these, with the brick cone on which they stand, form one of the grandest specimens of construction among many to be seen in the building.

The cone, although pierced with large openings, was built entirely without the use of centering. These lanterns were built for the purpose of ventilation. The terminal and crown on the spire which are represented in the wood-cut are of wrought copper gilded.



TERMINAL OF SPIRE.
Central Tower.



Edward N. Holmes del.

Scale of

x
v
o

Central + Gothic

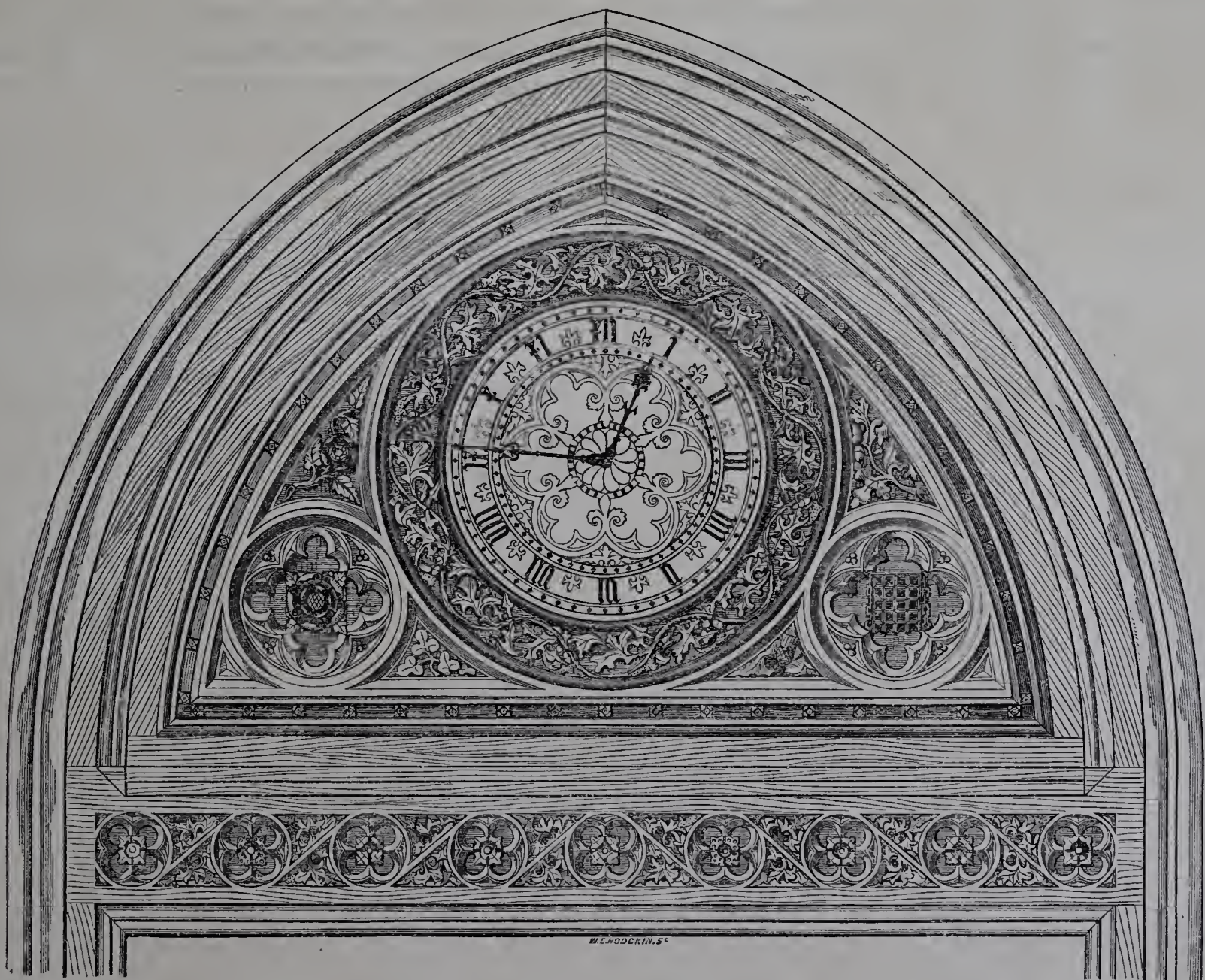
Warrington & Co London

On Steel by R.P. Cuff

THE COMMONS' LOBBY.

This apartment, which in general arrangement is similar to the Peers' Lobby, is about 45 feet square, on the plan, and has its four sides symmetrical. Each of them is divided into three compartments by stone piers; the lower part forming a kind of flat buttress, upon which stands an octagonal shaft supporting a bold corbel, richly ornamented, from which springs the bracket of the main ceiling beams; and at the base of the piers are large attached octagonal pedestals for statues.

The centre compartment on each side, consists of a deeply recessed arch, within which is a smaller arch, elaborately ornamented, and filled with oak screen-work and doors; that on the North side being the entrance to the House of Commons; that on the South side leading to the Central Hall, through the Commons' Corridor; that on the West side to the Cloisters and Members' Private Entrance; and on the East is the entrance to the Refreshment Rooms, Libraries, &c. In the oak screen-work of each entrance, over the doors, is a clock with a dial of the same characteristic design as the other clock dials in the building. The accompanying wood-cut represents that on the North side.



The sides of the lobby are divided into two heights by a carved frieze, bearing the inscription "Domine salvam fac reginam," in each compartment; the upper and lower portion of them being occupied by windows

THE NEW PALACE AT WESTMINSTER.

which give ample light to the apartment, and are filled with stained glass, consisting of flowered quarries surrounding lozenge forms, enriched with the arms of the boroughs returning Members to Parliament.

The lower portion of the sides consists of beautiful stone screen-work, in which, on each side of the principal archway, is a doorway giving access to the various offices connected with the House of Commons. On the right and left of the entrance to the House are the doors leading to the Gallery of the House; one being for Speaker's orders, and the other for Members' orders. On the West side is the Post Office, which is always open during the session.

The roof is of wood, divided by massive moulded beams into nine compartments, which are sub-divided into panels.

The floor is of encaustic tiles, and is also in nine compartments, formed by broad bands with the motto "God save the Queen," introduced.

A massive and elaborately wrought brass gas-standard at each of the angles, affords the means of artificially lighting the apartment.

During the sitting of the House, especially on important occasions, such as the debate on the budget, the Commons' Lobby is crowded with persons who have business to transact with the Members, or who wait their turn for admission to those parts of the Strangers' Gallery which are entered from here, and with the continual passing to and fro of the Members, causes a scene of bustle and activity, in this approach to the Chamber, wherein is transacted business, upon which hang the interests of the world.



E.N.Holmes, Arch^t del^t et litho.

HOUSE OF COMMONS LOBBY.

Warrington & C^o London.

THE HOUSE OF COMMONS.

The plan of the New Palace, of which there is a representation given in this work, shews the master mind of its architect which has given so large an amount of accommodation for the various requirements of the government, has made ample provision for the personal comfort of many of its officers and of the members of the legislature, and has also produced an arrangement of the parts of the building convenient and symmetrical: thus the Peers' Corridor, the Peers' Lobby and the House of Peers are extended to the South of the Central Hall and the Commons' Corridor, the Commons' Lobby and the House of Commons occupy the corresponding situation and extent to the North of it; the space from the Speaker's Chair to the Throne forming, when the doors to the two houses are open, a magnificent vista from North to South of nearly five hundred feet in length; in which richly moulded and elaborately carved archways and groining of stone, with their subdued tones and grey shadows, are alternately combined with the spacious and more brilliantly lighted Central Hall, Lobbies, and Chambers; possessing not merely the beauty of strictly architectural proportion and detail, but a series of thoroughly artistic and picturesque effects, unsurpassed in any other building devoted to civil purposes.

The House of Commons measures on the floor seventy-five feet in length, forty-five feet in width, and forty-one feet in height to the centre part of the ceiling, the side and end compartments of the ceiling being sloped.

The size of the house is as small as is permissible with the business transacted within it, particular regard having been had to the necessity of hearing, in all parts of the house, speeches delivered from any portion of the lower part of it; a peculiarity which is not required to the same degree in any other apartment, perhaps in the world; and it may be worthy of notice that a committee sanctioned the arrangement of the plan before it was carried into effect.

The chief entrance to the House is at the South end from the Commons' Lobby, (where the doorkeepers are stationed during the sitting of the house to prevent the ingress of persons who are not members,) through a vestibule, on the right and left of which are the South entrances to the Division Lobbies, which are separated from it by oak screens of tracery work, glazed.

Passing from the vestibule through the inner doorway, which has handsome glazed oak doors, the house is entered below the Bar, which is about twenty feet in advance of it, and is shewn in the view, which is taken on the right hand of the entrance, from the seats for Peers.

The Chair* of the Speaker is at the North end of the house opposite to the Bar; in front of the Speaker is the table at which the clerks sit, and on the lower end of it the mace rests during the sitting of the house: when the house is sitting in committee, however, the mace is placed under the table, at the same end of it.

The seats for the members are ranged in five tiers, one above the other, along the sides, and are returned at the Bar end; a gangway separating those on the sides into two nearly equal portions. The benches are commodious, and have cushioned seats and backs, which are covered with green† morocco; the small brass plates on the oak rail of the back are for the cards of the members, who having taken a seat, retain it during the sitting of the House. The bench on the right of the Speaker is occupied by the Ministry, and that on the left by the leading members of the Opposition.

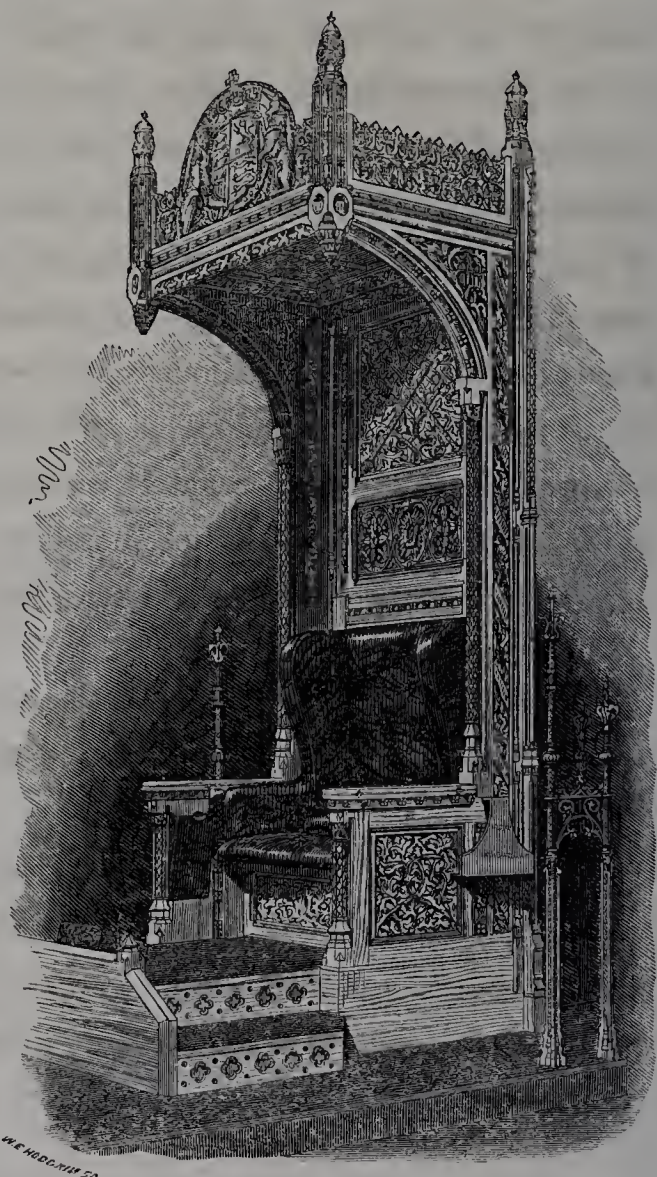
A seat at the side of the Bar and facing the Speaker is provided for the Serjeant-at-Arms, and is always occupied either by him or his deputy during the sittings of the house.

Below the Bar on both sides of the entrance, seats are provided for Peers and their sons.

An entrance at the North end of the House, behind the Speaker's Chair, communicates with the Division Lobbies as at the South end; beyond this are retiring rooms for the Ministers who may desire to consult together during the debates; and for the members of the Opposition for the same purpose.

The Division Lobbies extend along both sides and at the ends of the House to the vestibules, where the main entrances to them are, but there are also two other entrances on each side from the back tiers of seats in the house. The West Lobby is for those who say "Aye" to a question put from the chair, and the East Lobby for those who say "No." There are three large oriel windows in each of the Division Lobbies, which add greatly to the space, and to the appearance both internally and externally.

The Gallery floor extends round the four sides of the house and consists of two tiers of seats along the East and West sides for the use of members, the communication between them being at the South end, in front of the gallery. The gallery at this end is of considerable breadth for the accommodation of strangers. In the front of the strangers' gallery are seats for the Diplomatic corps; behind these is



* The wood-cut represents the Speaker's Chair; that on the left is an enlarged view of the panel in the side of the Chair.

† Green is the prevailing color in the furniture of the House and of the apartments appropriated to the use of the Commons; whilst crimson is used in the furniture of the House of Peers and the apartments adjoining to it.

THE NEW PALACE OF WESTMINSTER.

the portion appropriated for those who have Speaker's orders; the remaining portion of the gallery being for the use of strangers who are admitted by orders from the members.

The gallery above and a little behind the Speaker's chair, is separated into seats for the use of the reporters of the public press, and behind these are seats for reporters who are waiting. Retiring rooms are also provided for their use.

The Ladies' Gallery is situated at this end, above where the reporters sit, but without the house; the gallery being separated from it by a stone screen of rich tracery work, in which the open portions are filled with brass trellis. For the first time in the history of parliament a place has been appropriated for the use of ladies, who if one may judge by the attendance of the fair sex, fully appreciate the privilege.

Over the Division Lobbies are corridors divided into separate rooms and communicating with the galleries of the house; into these rooms the members can retire, either to refer to documents, or for interviews; and a staircase at each end communicates with the corridor below.

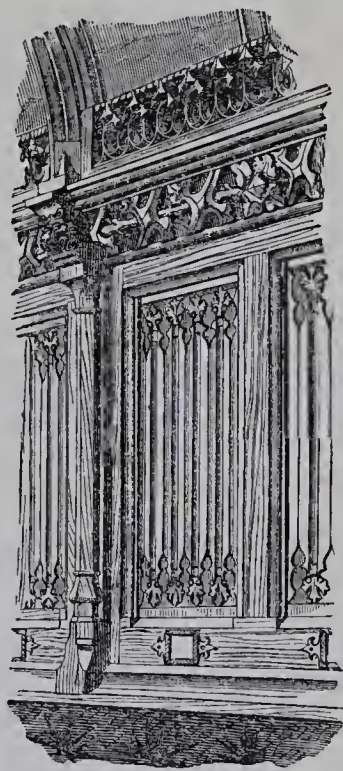
The general aspect of the House of Commons and its adjacent parts is quiet and grave; the prevailing tone being given by the oak fittings with which they are lined in every part: this, however, in the house is enriched in some measure, by the decorated panels of the ceiling, the royal arms in succession which enliven the front of the galleries, and by the richly colored glazing of the windows.

The windows of the lobbies are filled with stained glass in quarries, with occasional richer decoration; and they are of a similar character to those in the house.

The corridor at the North end of the House leads to the residence of the Speaker, and at the West end it communicates with the residence of the Librarian of the House of Commons, and that of the Clerk of the House, which are on the West side of the New Palace Yard; and also with the residence of the Sergeant-at-Arms on the North front.

Although the House of Commons is more simple in its ornamentation than the House of Lords, and has less of coloring and gilding, there is a large amount of exquisite detail in it, which is not inferior either in design or workmanship to that in the nobler chamber of the Peers.

A portion of the oak wall panelling and the cornice beneath the gallery is represented in the accompanying wood-cut.







H. N. Collins. Arch. Del. & Lith.

HOUSE OF COMMONS.

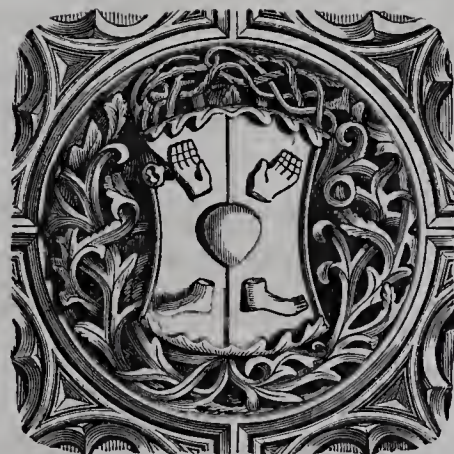
Warrington & Co. London

THE CLOISTERS.



BOSS, NORTH CLOISTER.

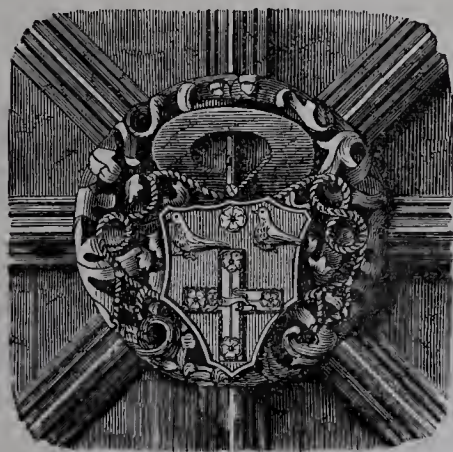
The Cloisters are quadrangular in plan and on the west side are attached to, and nearly parallel with, the wall of Westminster Hall; the south side stands a few feet from the buttresses of St. Stephen's Hall, formerly St. Stephen's Chapel. They are two stories in height and consist of five compartments or bays on the north and south sides, each measuring 9 feet 11½ inches, and six on the east and west, each measuring 10 feet 8 inches from centre to centre, divided by slender buttresses; the entire spaces between the buttresses are filled with windows and the spaces between the lower and upper windows with panneling, the buttresses also are pannelled.



BOSS, NORTH CLOISTER.

The ground-floor, which most claims attention, is vaulted with fan groining of an elaborate character, exhibiting variety of design and delicacy of workmanship, and in the centres of the groins are some finely executed bosses, four of which are represented in the annexed wood-cuts.

The subjects of these four bosses are as follows:—The castle with roses and pomegranates forming a border, was introduced, probably, in honour of Katherine of Arragon, Queen of Henry VIII; this has been erroneously described as a representation of the front of St. Stephen's Chapel. The boss in the East Cloister with



BOSS, EAST CLOISTER.

a shield and Cardinal's hat contains the arms of Cardinal Wolsey, who, at the time the cloister was erected, was in the zenith of his power and prosperity; that from the North Cloister represents the symbols of the Passion of the Saviour, and that from the South Cloister contains the monogram of the Saviour's title surmounted by a crown, surrounded by roses and pomegranates. The royal arms are introduced in another of the bosses, and of those not depicted here some are interesting.



BOSS, SOUTH CLOISTER.

Judging from the remains of the building after the fire in 1834, the upper story was originally used partly as a cloister, and the other portions as apartments; the roof was a modern one with a common plaister ceiling under it, and there were remains of a Purbeck stone floor in squares, which appeared to have formed part of the original pavement, over the fan groining of the cloister below.

Attached to the west side, and entered by a door in the screen separating it from the Cloisters, stands a chantry chapel, or oratory, consisting also of two stories; the lower one is finely groined with a stellar vault, and the upper one has some small delicately wrought niches and beautiful carving, the greater part of which are old. The groining of the Cloisters and oratory is entirely old, and at the time of the restoration was carefully repaired. The oriel on the right of the view is an addition. These Cloisters possess considerable interest both historically and architecturally, for they, together with the restored crypt of St. Stephen's Chapel and Westminster Hall, are as connecting links between the ancient Palace and the modern one, associating the history of the former building with the present, and are valuable national antiquities.

These Cloisters are stated by most authorities, to have been built between 1526 and 1549, by Dr. John Chambers, who was Physician to King Henry VIII., and the last Dean of this College of St. Stephen, at an expense of 11,000 marks, a sum equivalent to £7,333 6s. 8d. The date of their erection may be however more exactly determined, by the circumstance of the arms of Cardinal Wolsey being in so prominent a position, which would lead to the inference, that the Cloisters must have been erected prior to the death of Wolsey, which took place at Leicester Abbey Nov. 30, 1530; it being unlikely that Dr. Chambers, who was Physician to the King, would have introduced the arms of the Chancellor after his disgrace and death.

The whole of these Cloisters, excepting the heads of the upper windows and the parapet above the cornice, have been restored from the original fragments; but the old work having become decayed, then covered with cement, and afterwards much damaged by the fire in 1834, great care was required to reproduce their details.

The Cloisters now form part of the Commons' Private Entrance; the lower Cloister being used as the Cloak room; the Members' Writing Room, Hansard's Office for the sale of Printed Papers, the Private Bill Offices and a corridor, occupying the upper story.

The clock which is shewn, was in the old Palace, and was saved from the general destruction which took place at the time of the fire.



F. N. Holmes Arch^t del^t et litho

CLOISTERS, MEMBERS' ENTRANCE.

Warrington & C^o London

THE NEW PALACE OF WESTMINSTER.

MEMBERS' STAIRCASE.

The Members' Staircase forms a part of the Commons' Private Entrance, which is situated on the south side of the Star Chamber Court and is attached to the Cloisters.

The large Doorway, of elegant design, on the east side of Westminster Hall, communicates with a groined corridor leading to the foot of the Members' Staircase, on the right-hand side of which is an entrance to the North Cloister on the ground floor, directly opposite to the oriel window shewn in the view of the Cloisters. At the top of the Staircase a similar doorway leads into the corridor, which was formerly the upper North Cloister, and is now the entrance for Members of the House of Commons to the House lobby. This corridor is now groined, but formerly it had a horizontal ceiling.

The roof of the Members' Staircase is groined in six compartments, and is lighted by three windows on the north side, filled with stained glass.



E N Holmes Arch^t del^l et litho.

STAIRCASE, MEMBERS' ENTRANCE.

Warrington & C^o London

THE NEW PALACE OF WESTMINSTER.

THE STAR CHAMBER COURT.

This Court Yard is on the East side of Westminster Hall, between that building and the House of Commons : on the South side of it is the Members' Staircase, and on its North side the residence of the Deputy Housekeeper which separates it from New Palace Yard. The lower story of this pile of buildings comprises the archways, which are the carriage entrances to the Court, beneath one of which the view is taken, and a smaller archway which is the entrance to an open arcade attached to the East wall of Westminster Hall, forming a covered approach from New Palace Yard to the Members' Staircase.

A view of the old Star Chamber is given at page 24 of the History of the Palace of Westminster in the first series, where some account of it will be found.

There were on this side of Westminster Hall, until the erection of the present buildings, several of the massive flying buttresses, which served to counteract the thrust of the roof. There are others yet remaining on the West side. The last of these buttresses on the East side were removed to give space for the existing arrangements of the Members' Entrance.

ORIGINAL ARTICLES

1. The Effect of the Diet on the Blood Sugar in the Normal Individual and in the Diabetic Patient. (Continued from page 1000.)
The effect of the diet on the blood sugar in the normal individual and in the diabetic patient has been studied by many investigators. The results of these studies have been conflicting. Some investigators have found that the diet has a marked effect on the blood sugar, while others have found that it has little or no effect. The present study was designed to determine the effect of the diet on the blood sugar in the normal individual and in the diabetic patient.

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N.º 1. Arch. dell' St. James.

ST. JAMES'S COURT.

Warrington & C^o London

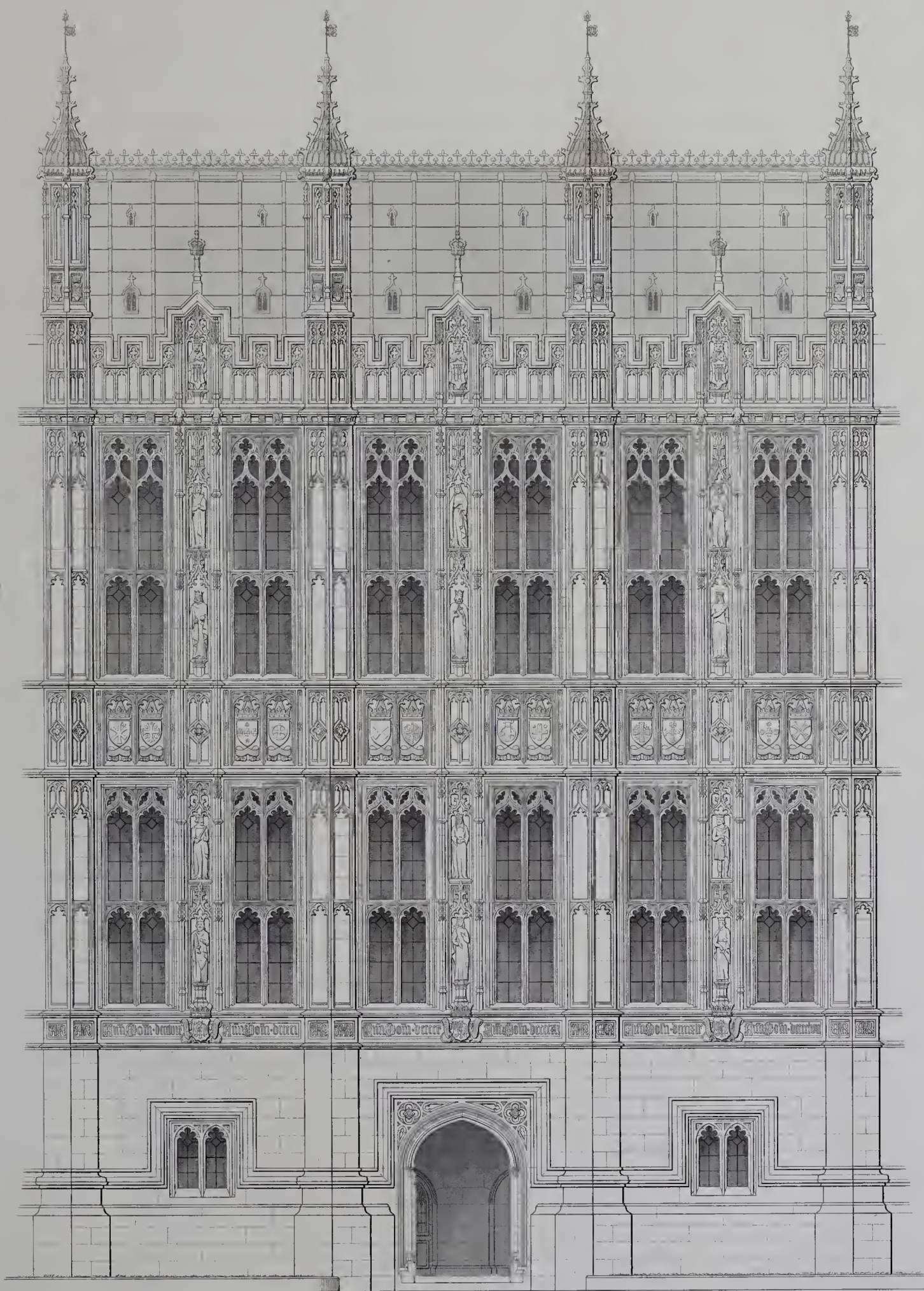
THE NORTH FRONT.

The North Front is disposed in eleven bays, of which eight contain two windows in the breadth, one smaller bay towards the west only one window, and two bays form the flank of the North Wing Tower, which has large octagonal buttresses at the angles, and is similar to that of the South Wing Tower, of which a view is given in this work. The eight bays, of which three are represented in the accompanying engraving, are divided from each other by hexagonal buttresses, terminating in open pinnacles, crocketed, and having gilded metal vanes.

The windows in the eight compartments are separated vertically by niches, containing statues of the Sovereigns from the Heptarchy to the Conquest, whose arms are sculptured on the shields which enrich the panels between the windows of the principal and upper stories; whilst the dates of their accession are carved in the band below the principal floor windows. The shields between the windows of the two stories in the western bay contain the arms of England and Scotland.

In the centre of each compartment of the parapet is a niche containing a lion holding a shield bearing the initials V. R. with a cord entwined, and the parapet is surmounted in the centre by a terminal with an imperial crown.

The North Wing Towers and a portion of the North Return, as far as the centre of the doorway shewn in the plate, form the residence of the Speaker; the remaining portion of the North Return being the residence of the Serjeant-at-arms. This doorway affords access from the Speaker's house to the enclosure between the building and Westminster Bridge



E.N. Holmes. del^t

Eng^d on Steel by R.P. Cuff

North Return.

Scale of x v 0 x xx xxx xl feet

THE NEW PALACE OF WESTMINSTER.

THE CLOCK TOWER.

The Architect of the building of which it is our province to give some account, has wisely retained some, and has reproduced other of the principal features of the old Palace in his own work. The Clock Tower is an example of this, for in the reign of Edward the First, there was a tower built in New Palace Yard, exactly opposite to the entrance to Westminster Hall. It is recorded, that "Ralph de Hingham, the Chief Justice of the Court of King's Bench was fined 800 marks for altering a record, from motives of compassion however, and that sum was laid out in the erection of a tower opposite to the gate to Westminster Hall." Afterwards a clock was placed in it, of which an old chronicle says, that "its intent was, by the clock striking continually, to remind the Judges in the neighbouring Courts to administer true justice, they calling thereby to mind the occasion and means of its building."

After the destruction of this tower, which took place about the year 1715, its site was marked by a sun-dial on a stone pediment in the upper part of a brick front of one of the houses which were erected on the spot; with the motto over the dial "Discite justitiam, moniti." This record was recently removed in making the approaches to the New Bridge. Stowe writes, that "John Lincoln was keeper of the clock here in 1394;" and, again, "in the reign of Henry VI., the keeping of this clock, with the tower called the clock-house and the appurtenances, was granted to William Walsby, Dean of St. Stephen's, with the wages of 6*d.* a-day out of the Exchequer."

A view of this Tower may be seen in Hollar's print of New Palace Yard, which bears date 1647.

The Clock Tower stands at the north-east corner of New Palace Yard, marking in a conspicuous manner the northern extremity of the building and balancing in some measure, yet entirely differing from, the grand Victoria Tower at the southern end of it. The general design of the Tower, of which only the lower portion is here represented, is appropriate in its outline and is elegant in its proportion and details; one principal feature in its composition being of course the Clock.

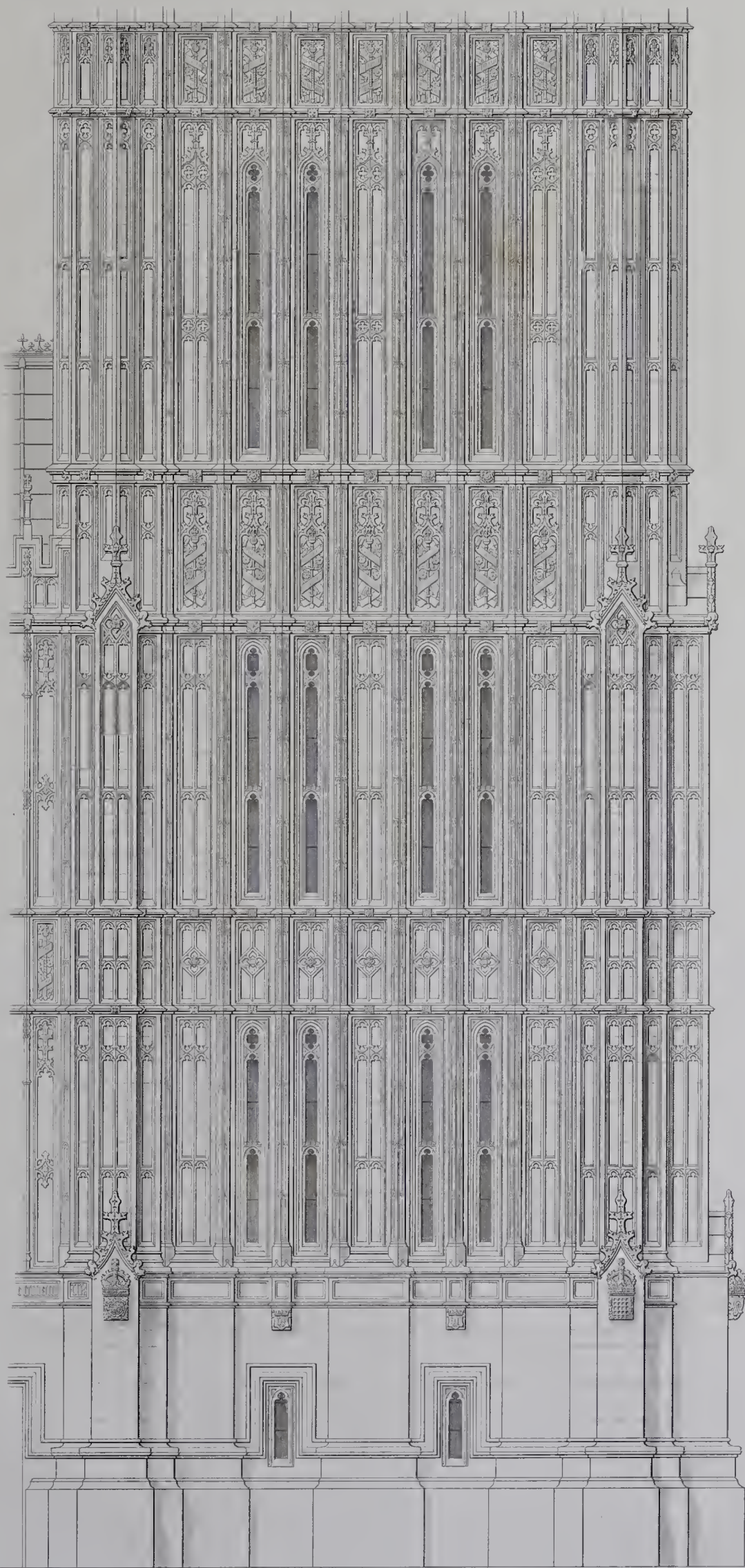
The plan of the Tower is square; the angles are marked by flat pilaster projections forming two sides of a square, these two faces being entered by the sides of a similar square placed diagonally. The faces thus formed are narrow and panelled. This arrangement is continued from the level of the cornice of the main building to the corbelling under the clock dials. At the lower part of the Tower the flat projections are strengthened by square buttresses in two stages, the upper one being panelled. The walls of the Tower, from the level of the cills of the principal floor windows to the corbelling under the dials, are divided into seven narrow compartments by slender

buttresses placed diagonally; four of these compartments are pierced and form narrow windows in couples, of which there are five tiers in the height of the Tower; between them are bands of panelling across the Tower, which give a richness to the whole.

The interior arrangement of the Tower comprises a stone staircase at its west angle, from the ground to the level of the floor of the bell lantern; a shaft the entire height, from the basement to the bell lantern, for the discharge of vitiated air from the building; a centre shaft, through which the bells were hoisted and in which the clock weights are suspended, which extends from the ground to the clock-room floor; the space on the east and north sides being occupied by record rooms, except the three lower stories which are on a level with those of the stories of the Sergeant-at-arms' residence, and are entered from them. These are the prison-rooms belonging to the House of Commons. On the ground-floor two rooms are provided for a porter, and by the side is the entrance to the North Return enclosure, between the north wing and the bridge.

The present situation of the Tower, attached as it is to the building on one side only, is very unsatisfactory in an architectural point of view; and it is to be hoped that the original intention of the architect will be carried into effect, by the enclosure of New Palace Yard with buildings of the same character as those on the other side of it; the Tower, now almost detached from the Palace, would then obtain its proper relative position as forming an important part of a very beautiful composition.

The engraving represents the East side of the Tower.



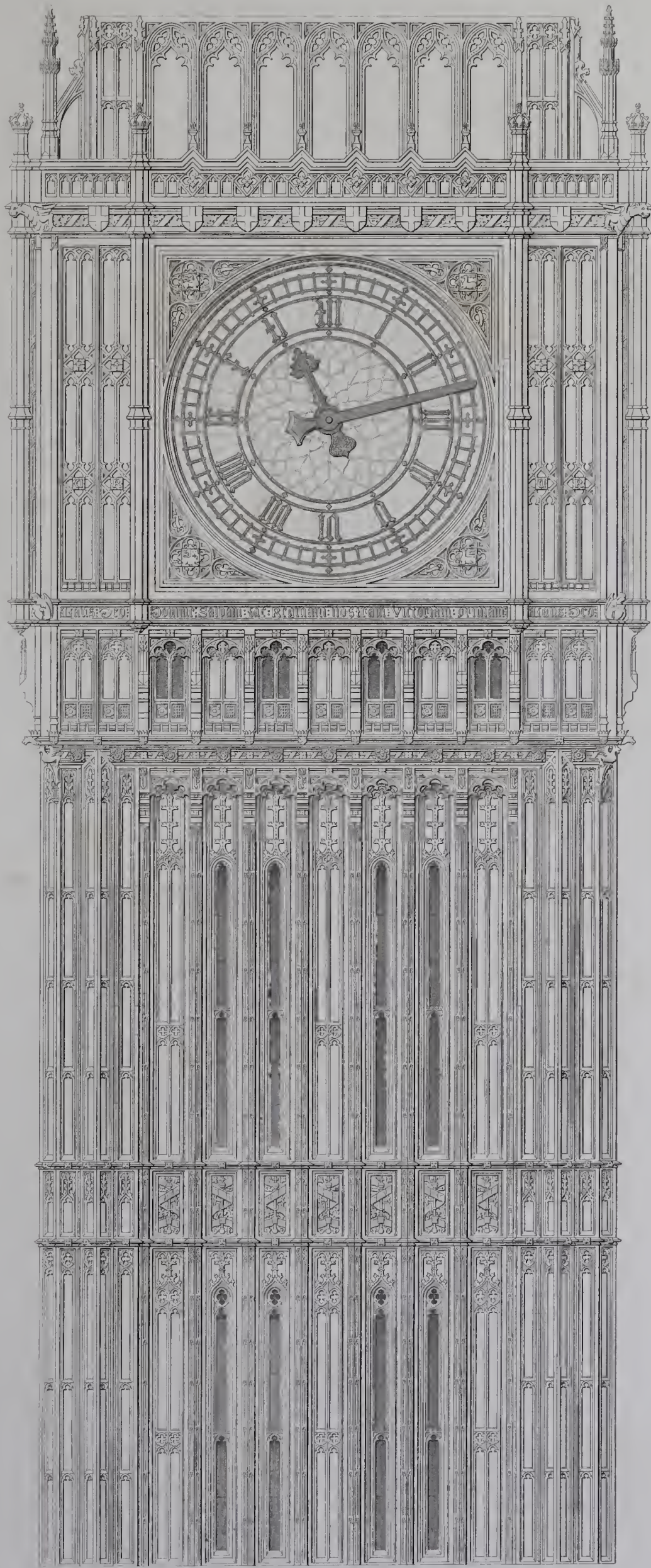
Edward N Holmes del

On Steel by R.P Cuff

Clock + Tower
lower portion.

Scale of x v 0 x xx xxx xl L feet

Warrington & Co London.

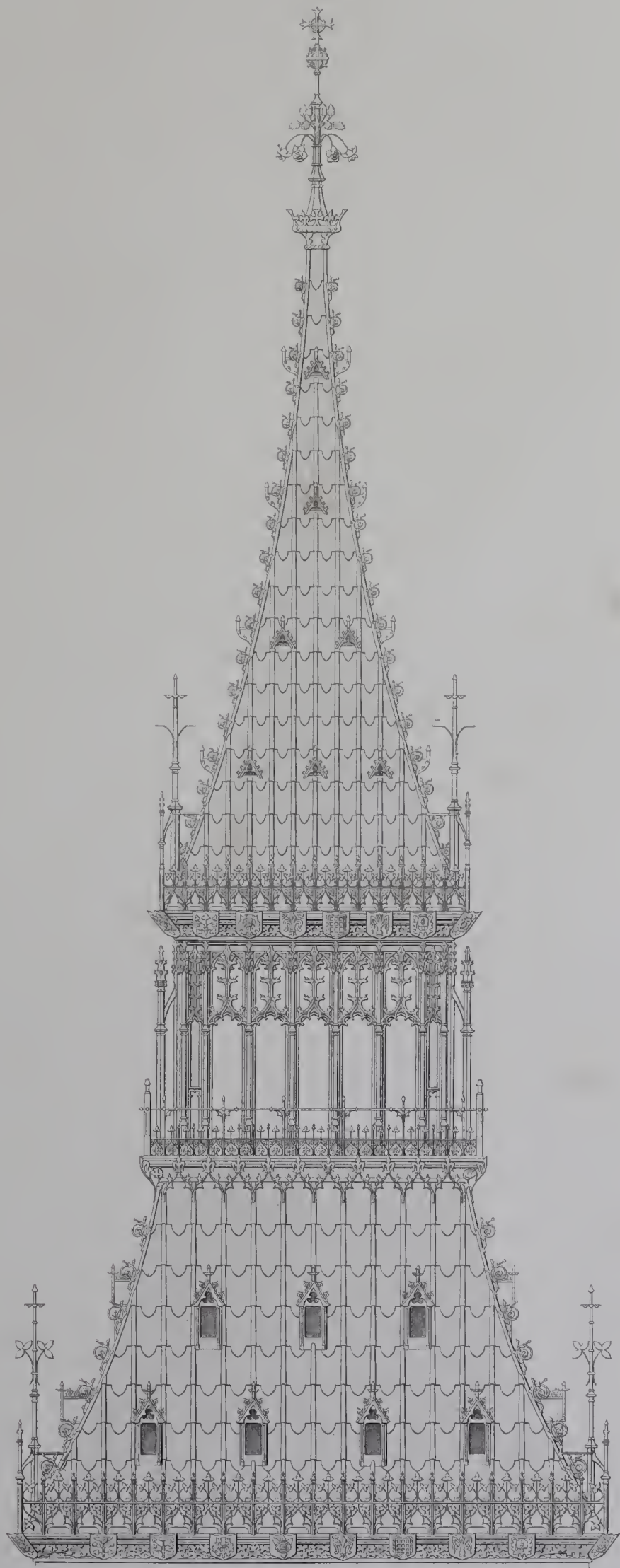


Edward M. Holmes del.

Clock Tower,
middle portion.

Des. by H. E. Hall

Warrington & Co London.



Edward N Holmes del^t

Clock Tower.

Or. Steel by R P Gill

roof portion.

Scale of 10 20 30 40 50 60 70 80 90 100 feet

Warrington & Co London



THE CLOCK TOWER.—(*Continued.*)

UPPER PART.

The slender diagonal buttresses, which have been described as separating the compartments of the wall, terminate in moulded eorbel, which project as far as the face of the piers at the angles of the tower, and support a cornice, decorated with ribbons and roses, with a winged animal at each angle: the face of the clock story projects beyond that of the wall below.

The second tier of eorbel supports the square projecting mass of stonework within which the clock dials are placed, the most prominent feature of the stonework of the tower: over this is the upper and main cornice, decorated with large shields, bearing the cross of St. George, and at its angles are winged animals larger than those on the lower cornice, but of similar design.

Over the cornice is the parapet of pierced tracery; it surrounds the bell chamber and forms a gallery: the parapet has finials bearing orbs, one over each of the buttresses below.

There is a dial on each side of the tower, 22 ft. 6 in. diameter, clear of the stone circle. The circle is comprised within a square, which fills the space between the angle piers and projects beyond them: the angles of the square have octagonal shafts; they are carried above the parapet and are terminated by an imperial crown of stone.

The spandrils formed by the angles of the square by which the circle is bounded, are richly decorated with tracery and with heraldic supporters of the present and past sovereigns.

An arcade of stonework surrounds the bell chamber, the base of it being on a level with the base of the parapet; it is the uppermost part of the stonework of the tower. It measures in height 14 feet 3 inches from the gallery to the top, upon which is fixed the bed-plate of the iron roof.

At each angle of the arcade is a flying buttress, which springs from an octagonal pinnacle at the angle of the parapet.

On the stone arcade forming the bell chamber stands the beautiful lantern spire, the seating of which is formed by a broad sole plate which is bolted down to the stonework; strong cast iron stanchions upon this plate support the iron head piece which forms both the gutter and the cornice of the lower roof, and likewise the foot plate of the lantern.

At the foot of the spire is a large moulded cornice of iron with foliage in the cove, and upon the face and at each angle of it are large shields, enriched with badges and heraldic devices, as the rose, shamrock, thistle, fleur-de-lis, portcullis, leek, &c. On this cornice is a very rich brattishing of metal work, with finials at the angles of the roof.

The height of this part of the roof, from the top of the stone arcade to the top of the cornice is about 26 feet.

The lantern is of iron, on each side it has five openings with tracery in the upper part of them, and ogee crocketed heads; the angles have similar smaller compartments of panelled iron work, with a detached pinnacle and flying buttress.

The lantern is of iron, in size somewhat smaller than the top of the lower stage of the roof.

The front of this cornice is decorated with light tracery canopies which spring from the rolls of the roof, above which is a light iron railing of beautiful design, of iron and copper.

The lantern is of iron, and has its sides somewhat smaller than the top of the lower stage of the roof; it has on each side five openings with tracery in the upper part, having ogee crocketed heads; the mullions are moulded, and have square buttresses; the angles of the lantern are of corresponding design to the open compartments, but are narrower, and a light flying buttress stands over the angle of the roof below.

The moulded cornice of the lantern is similar to the cornice at the foot of the spire; it has a large shield over each angle, and over each of the buttresses between the compartments; these shields bear various badges and heraldic devices, as the rose, shamrock, thistle, fleur-de-lis, portcullis, leek, &c., and upon the cornice is a cresting, with finials at the angles of the spire. The sides of the spire are concave, and terminate in an imperial crown of square form, above which is an elaborate finial with the orb and cross surmounting the whole. This finial is of copper, gilded. The angles of both the upper and lower portions of the spire are decorated with crockets of peculiar design and very effective character.

The general colour of the lantern spire is grey. The stonework surrounding the clock-dials, large portions of the railings, brattishing, and other ornamental parts of the spire and lantern are gilded.

The diameter of the clock dial, clear of the iron rim surrounding the glass, is 22 feet 3 inches; the dial is of cast iron framework, the letters forming part of it; the smaller bars of the rim of the dial are of copper, cased with white enamel, corresponding with the glass. The tracery work of the centre of the dial is of cast iron,

THE NEW PALACE OF WESTMINSTER.

and gilded. The dial is filled in with glass covered with white semi-opaque enamel for the purpose of illumination. The main cast-iron divisions of the dial and letters are coloured blue.

Between the inside of the tower wall and the dial is the lighting chamber, 5 feet 2 inches in breadth from the glass to the face of the wall, which is finished white; and against it are fixed rows of gas burners, forty in number, a small jet being provided behind each of them, which may be lighted and kept burning during daylight. By this arrangement the two systems of burners are alternately lighted, one to burn by day, the other by night; and the supply can be regulated at the foot of the tower, so that the labour of ascending to the lighting-chamber every evening and morning is rendered unnecessary.

An archway is formed in each of the angle piers between the lighting-chambers, connecting them together.

The clock-room occupies somewhat more than half the area of the space surrounded by the lighting-chambers; and is on the North side of the interior of the tower, the ventilating shaft and the staircase occupying the remainder. The size of the clock-room is 28 feet by 18 feet, and its floor is 8 feet 6 inches below the centre of the dials. The shaft in which the clock weights hang is 171 feet 6 inches to the clock-room floor, and the walls on the North and South sides of the shaft are continued to 2 feet 6 inches above the floor, forming two piers upon which are bedded "two iron plates, which cover the walls, and are built in quite through the wall of the air-shaft, so as to prevent any possibility of endway motion of the clock frame, which is bolted to the plates." The top of these walls is, therefore, 6 feet below the centre of the dials, and the centre of the dials is about 180 feet above the ground.

The clock frame is 15 feet 6 inches long, and 4 feet 7 inches wide. It is fixed upon iron plates, which cover the two stone walls before described as forming the top of the north and south walls of the great central shaft. The going part of the clock does not occupy more than 2 feet of this width, the front bushes of the wheels being carried on a separate frame-bar lying on two cross pieces bolted to the front and back girders. There are two great beams which go across the room from East to West above the clock to carry the "motion work," and upon these beams is fixed a double barrelled crab, the ropes from which descend through the space between the front of the going part and the great frame, and down the weight-shaft. The back of the clock-frame is 2 feet 5 inches from the West wall of the room, that is the East wall of the ventilating-shaft, which runs all the way up the tower from the basement to the level of the bell-chamber floor. The pendulum cock is of cast iron, built into the wall. The pendulum chamber is made of cast iron, and serves to protect the pendulum from wind; it is within the weight shaft, on the East side of it, and there is a ladder and trap-door to descend into it. The floor over the weight shaft, and of course under the clock, is an iron grating lying upon beams.

THE NEW PALACE OF WESTMINSTER.

The pendulum weighs 685 lbs. altogether. From the top of the spring to the bottom of the bob and compensation tubes is 14 feet 5 inches. The compensation is effected by a combination of zinc and iron. The pendulum spring is $\frac{1}{60}$ of an inch thick, 3 inches wide, and 5 inches long between the chops.

The escapement is Mr. Denison's double three-legged gravity escapement, the teeth of which are 5 inches long. The pressure on the stops is about 4 ounces, and the force required at every beat to lift the pallets is equal only to one ounce falling $\cdot 9$ of an inch.

The going weight of the clock is 200 lbs. including the pulley, and is suspended by a double line making the applied force equal to about 100 lbs.; and this takes about 20 minutes to wind up.

The hour-striking weight is 2688 lbs., on a double line, making the force applied to raise the hammer equal to about 1344 lbs.: this takes about 4 hours to raise it 176 feet; the power required to raise it being reduced by a wheel and pinion.

The quarter-striking weight is about 4032 lbs., on a double line, which, therefore, acts with a force of 2016 lbs., and is raised in about the same time as the hour-striking weight.

The lines by which the weights are suspended are steel wire rope, that for the going-weight is $\cdot 25$ of an inch diameter, and those to the striking-weights are $\cdot 6$ of an inch diameter.

The quarter and hour-striking trains will go four days without winding; and the going part of the clock eight days without winding.

There is a communication by electric telegraph from the clock to the Royal Observatory at Greenwich, and contact between the clock and telegraph is made once every hour, so that the Astronomer Royal can ascertain the rate of the clock by day or by night. The time is reported at present twice a-day, namely, at 11h. 40m. A.M., and 12h. 40m. P.M.

The clock was made by Mr. E. Dent, from the design of Mr. Edmund Beckett Denison, Q.C.

The stone staircase at the South-east corner of the tower, leads up to the bell chamber, at which level the ventilating shaft terminates. From the floor of the bell chamber an iron staircase of open trellis work at the South-east corner, ascends to the base of the iron roof, from thence to the floor of the lantern; it is spiral and is supported by a pendent newel. The floor of the bell chamber is of Hopton wood stone.

THE NEW PALACE OF WESTMINSTER.

There are five bells, the dimensions, weights and other particulars of which are given in the following table:—

	Date.	Diameter at bow.	Height.	Weight.	Thickness at bow.	Hammer Head.	Note.
The Great Bell	1858 ..	9 feet ..	7 feet 6 in. ..	13 tons 10 cwt. 3 qrs. 15 lbs. ..	8 $\frac{3}{4}$ in. ..	766 lbs. ..	E.
The 4th Quarter Bell ..	1857 ..	6 feet ..	..	3 „ 17 „ 2 „ 13 „ ..	5 $\frac{7}{8}$ in. ..	185 lbs. ..	B.
The 3rd ditto	1858 ..	4 feet 6 in. ..	..	1 „ 13 „ 2 „ 13 „ ..	4 $\frac{1}{3}$ in. ..	100 lbs. ..	E.
The 2nd ditto	1857 ..	4 feet ..	..	1 „ 5 „ 1 „ 2 „ ..	3 $\frac{7}{8}$ in. ..	73 lbs. ..	F sharp.
The 1st ditto	1857 ..	3 feet 9 in. ..	..	1 „ 1 „ 0 „ 23 „ ..	3 $\frac{3}{4}$ in. ..	53 lbs. ..	B flat.

The thickness of the great bell at the thinnest part is 3 inches. The weights of the hammers do not include the levers and tails which to the great bell weigh 782 lbs. The hammer of the great bell has 13 inches of oblique lift, or a little more than 9 inches of vertical lift. The fall given to the hammers of the quarter bells is varied from 7 inches to the smallest bell, to 9 inches to the largest one.

The weight of the clapper to the large bell is about 8 cwt.

The following inscription is cast in raised letters round the bow of the large bell:—“This bell, weighing 13 tons 10 cwt. 3 quarters 15 lbs., was cast by George Mears, of Whitechapel, for the clock of the Houses of Parliament, under the direction of Edmund Beckett Denison, Q.C., in the twenty-first year of the reign of Queen Victoria, and in the year of our Lord M.D.CCC.LVIII.”

All the bells have a top like a large button with a thick neck, instead of the six canons usually cast on bells. An iron collar in two halves, embraces the neck of the top, and six bolts passing through the collars suspend the bell from the beam. By this arrangement, when the bolts are loosened a little, the bell can be shifted into another position after it is worn by the clapper or clock-hammer. There is a packing between the collar and the top of the bell by which any contact of the metals is avoided.

The great bell was cast on the 10th of April, 1858; was conveyed to Westminster on the 31st of May; was lifted to the clock chamber on the 13th and 14th of October, and to the bell chamber on the 21st October. It was suspended from the bell carriage on the 11th of November. It was first struck with the clapper on the 18th of November in the same year, and was first struck from the clock in June, 1859.

The bells are hung at a height of 201 feet from the ground; the largest one in the centre of the bell chamber, the 4th quarter-bell, to the North-east; the 3rd quarter to the South-east; the 2nd quarter to the South-west, and the 1st quarter to the North-west.

The bell frame is constructed of wrought iron beams, supported by cast iron struts in an inclined position, which rest upon the walls of the tower, with large wrought iron braces at the angles of the frame, both vertically and horizontally. The feet of the cast iron braces stand upon iron rollers and are tied together by iron rods which cross the tower and prevent any thrust which might push out the walls.

The Second Series of "Illustrations of the New Palace of Westminster" being now completed, a condensed account of the life of the Architect, who died before the completion of his great work, and some other particulars connected with the progress of the building, may not be out of place.

Sir Charles Barry was born on the 23rd of May, 1795, in Bridge Street, Westminster. The first part of his education he received at Wright's academy, in South Lambeth, the latter part at Christ's Hospital. At the age of sixteen he was articled to Messrs. Middleton and Bailey, surveyors to the parish of Lambeth, with whom he remained about five years. In 1812, before he was seventeen, Barry was admitted as an exhibitor at the Royal Academy, and his first exhibited drawing was "A View of the Interior of Westminster Hall." In April, 1817, he quitted England, and was engaged in Northern Italy, drawing and measuring: after some interval he was, in 1818, on the point of returning home, when an engagement as travelling artist was offered to him by a gentleman whom he accompanied to the Nile and the Holy Land.

In 1820, he established himself in business in Ely Place, and about this time he married; in 1822, he was occupied upon what appears to have been his first architectural work, the Church of St. Matthew, at Manchester. In 1827, Mr. Barry removed to Foley Place, and in 1832 completed the Travellers' Club, a gem of Italian Architecture; and on the 1st November in that year sent in his design for the Free Grammar School at Birmingham, a Tudor building, which was completed in 1837. About the same time that most beautiful example of Italian architecture, the Reform Club, was begun.

Some account of the competition for the designs of the Houses of Parliament, of the commencement of the works, and the commission for the selection of the stone for the building has been already given.

The first stone of the superstructure, the angle of the plinth of the Speaker's house, nearest the Bridge, was laid on the 27th April, 1840; and the first stone of the Victoria Tower was laid on the 22nd December, 1843, by Lady (then Mrs. Barry,) the wife of the Architect.

In 1841, Mr. Barry removed to Great George Street, Westminster, and the works of the New Palace proceeded very rapidly.

Mr. Barry was knighted in 1852, on the occasion of Her Majesty making her first state entrance through the archway of the Victoria Tower, to open Parliament. In 1853, he went to reside at Clapham; removing his offices to Old Palace Yard.

On the 12th May, 1860, Sir Charles was in his usual health; in the evening of that day he was taken suddenly ill, and expired a little before midnight, in the 65th year of his age. He was buried in the nave of Westminster Abbey on the 22nd of May. His funeral was attended by the President and Council of the Royal Institute of British Architects, by members of several other scientific and learned societies, by the artists, assistants, contractors, and workmen who had been employed upon his great work.

Some idea may be formed of the amount of labour which the conduct of the building involved, when it is known that about 5,000 carefully finished drawings, and nearly that number of supplementary drawings were made in carrying on the works.

After the death of the accomplished architect of the New Palace, Mr. Edward Middleton Barry, was appointed to succeed his father in the carrying on of the works.

The national importance of a work of the magnitude of the New Palace, combining as it does beauty of design with skill in construction and excellence of workmanship, cannot be too highly appreciated. It has been the means of training a numerous body of skilled artists and artizans, as well as of giving employment to many men of talent, who spent upon it many of the best years of their lives; and it has likewise afforded a large field for the labours of painters and sculptors.

Messrs. Henry and John Lee built the coffer dam and river wall, the contract for which was signed on the 11th September, 1837. On the 4th June, 1840, Messrs. Grissell and Peto undertook their first contract for the building generally, after a limited competition; subsequently Mr. Grissell carried on the works alone, until July, 1852, when Mr. Jay undertook the works, which he conducted until the completion of the building. Messrs. H. and M. D. Grissell executed a large portion of the iron work: Mr. Jabez James executed the iron roof of the clock tower, some of the smoke turrets, and many of the numerous mechanical contrivances in the building: Messrs. Hardman and Co. prepared the stained glass, the ornamental iron and brass work, &c.: Mr. Crace, supplied all the decorations, the carpets, curtains, &c.: Mr. Minton was the manufacturer of the tiles: Mr. Jeakes carried out the greater part of the kitchen fittings, hot water arrangements, &c. The large water tanks and the large mains for the supply of the various departments with water, were the work of Messrs. Easton and Amos. Mr. Field was engaged in the execution of the pavements and the marble work: Messrs. Deville and Co. made the whole of the metal sashes, and in the earlier years of the building, Messrs. Gillow supplied the furniture.

A large portion of the modelling was executed by Mr. Mabey, under the direction of the late Mr. Thomas, and Mr. Wardle was superintendent of the works under Messrs. Grissell and Peto, the original contractors. The wood furnishings were executed at the workshops at Thames Bank, under the supervision of Mr. Bayne.

Mr. Robert R. Banks was Sir Charles Barry's chief assistant during the earlier years of the New Palace; as were also Mr. Groves and Mr. Wright; the constructive and scientific arrangements were conducted under Mr. Meeson; Mr. Quarm was for many years chief superintendent of the works; the stone carving and architectural sculpture were under the direction of Mr. Thomas.

The wood carving, the metal work, tiles and stained glass were under the superintendence of the late Mr. Pugin, until the time of his death. The surveyors who were employed in measuring the works were the late Mr. Webster and Mr. Quilter.

The whole of the drawings and the lithographs for the second series of this work are by Mr. E. N. Holmes, who was engaged in the office of the late Sir Charles Barry; and the steel engravings are by Mr. R. P. Cuff.

To Mr. E. M. Barry, the publishers feel greatly indebted for the kind and indispensable assistance which he has afforded, by allowing them access to the drawings of the building. To Mr. Daniel Ruddle, for many years engaged on the works under the late Sir Charles Barry, the publishers are indebted for the letter press description accompanying the plates in this Series.

Additional information respecting the New Palace, will be found in the following papers, read at the Royal Institute of British Architects:—

"Some description of the mechanical scaffolding used at the New Palace at Westminster, particularly in reference to the three main towers of the building," by Mr. Charles Barry, June 15th, 1857. "An account of the New Palace at Westminster, and the progress of building the same," by Mr. E. M. Barry, February 1st, 1858. "On the Architectural Career of the late Sir Charles Barry," by Mr. M. Digby Wyatt, May 21st, 1860. Also, in Mr. Denison's "Treatise on Clocks, and on the Westminster Palace Clock," 1860. Some of the particulars given have been supplied from these sources.

